

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
HEALTH  
ORGANIZATION



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Agenda Item 11 (b)

CX/RVDF 06/16/13 (Part 2)

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(in original language only)

## JOINT FAO/WHO FOOD STANDARDS PROGRAMME

### CODEX COMMITTEE ON RESIDUES OF VETERINARY DRUGS IN FOODS Sixteenth Session

*Cancun, Quintana Roo\*, Mexico, 8 -12 May 2006*

#### REPORT OF THE WORKING GROUP ON RESIDUES OF VETERINARY DRUGS WITHOUT ADI/MRL

COMMENTS SUBMITTED IN RESPONSE TO CL 2004/50-RVDF PART C

by Australia, Canada, Costa Rica, the European Community, Sweden and the United States  
(for information)

#### AUSTRALIA

Australia welcomes the opportunity to provide comments on *CL 2004/50-RVDF – Part C: Request for Comments/Information on Veterinary Drugs without ADI/MRL*. Australia also looks forward to being represented on the Working Group to develop recommendations on how to deal with veterinary drugs for which an ADI or MRL could not be set (ALINORM 05/28/31, paragraphs 173-176).

The following is provided in response to the request for information contained in CL 2004/50-RVDF:

#### 1. Compounds with no Codex MRLs used at national level for food animals.

Attached is a spreadsheet that lists the Australian MRLs and corresponding Codex MRLs (where available) for all veterinary drugs used in Australia for food-producing animals (see [Attachment 1](#)).

The veterinary drugs that do not have Codex MRLs have been highlighted in the spreadsheet and are also listed here:

Altrenogest, Amitraz, Amoxicillin, Ampicillin, Amprolium, Apramycin, Avilamycin, Avoparcin, Bacitracin, Benzocaine, Carbetamide, Cephalonium, Cephapirin, Chlorhexidine, Clavulanic acid, Clorsulon, Cloxacillin, Coumaphos, Dexamethasone, Dimetridazole, Erythromycin, Flavophospholipol, Florfenicol, Flumethrin, Flunixin, Isoeugenol, Ketoprofen, Kitasamycin, Lasalocid, Maduramicin, Mebendazole, Meloxicam, Monensin, Morantel, Naphthalophos, Narasin, Nitroxynil, Norgestomet, Novobiocin, Olaquinox, Oleandomycin, Oxolinic acid, Praziquantel, Salinomycin, Semduramicin, Sulphadiazine, Sulphadoxine, Sulphaquinoxaline, Sulphatroxazole, Tiamulin, Tolfenamic acid, Triclopyr, Trimethoprim, Tylosin and Virginiamycin.

#### 2. Compounds in use that raise health concerns.

Not applicable.

\* To be confirmed

**3. Compounds in use that create trade problems<sup>1</sup>**

Veterinary drugs for which there are no Codex MRLs or the Codex MRLs are lower than the Australian MRLs:

<b>Cattle</b>	<b>Sheep</b>
abamectin	abamectin
chlorfenvinphos	albendazole
endosulfan	chlorfenvinphos
ethion	dicylanil
	mebendazole
	praziquantel
	temephos
triclabendazole	triclabendazole
z-cypermethrin	

**4. Compounds in use that create trade problems<sup>2</sup> (continued).**

Veterinary drugs for which the Codex MRLs are not accepted by Australia's trading partners.

<b>Cattle</b>	<b>Sheep</b>
	a-cypermethrin
	amitraz
	closantel
cypermethrin	cypermethrin
	cyromazine
deltamethrin	
	diazinon
fenthion	
	triflumuron

**5. Compounds recommended for inclusion in a negative list and the reasons for their inclusion in that list.**

NA

**6. National or regional MRLs (if any).**

Attached is a spreadsheet that lists the Australian MRLs and corresponding Codex MRLs (where available) for all veterinary drugs used in Australia for food-producing animals (see [Attachment 1](#)).

**7. Other tolerances or applications of an analytical limit of detection or determination.**

NA

**8. Australia's nominee for the Working Group to Develop Recommendations for Dealing with Veterinary Drugs without ADI/MRL.**

As previously advised in our letter of 7 December 2004 to Dr Gundrun Gallhoff of the European Commission, Australia's nominee for this CCRVDF Working Group is:

Dr Bill Turner, Counsellor (Agriculture)

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<sup>1</sup> Note: Potential for problems due to MRL differences, but actual problems yet to eventuate for Australia's trade.

<sup>2</sup> Note: Potential for problems due to MRL differences, but actual problems yet to eventuate for Australia's trade.

## Attachment 1

CODEX APVMA - MRL TABLE; VETERINARY DRUGS					
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP
<b>Abamectin</b>					
MO	812	Cattle, Edible offal of	0.1	-	
MF	812	Cattle fat	0.1	0.1	
		Cattle Kidney		0.05	
		Cattle Liver		0.1	
MM	812	Cattle meat	0.005	-	
ML	812	Cattle milk	0.02	0.005	
MO	1284	Pig kidney	0.01	-	
MO	1285	Pig liver	0.02	-	
MM	818	Pig meat [in the fat]	0.02	-	
MO	822	Sheep, Edible offal of	0.05	-	
MM	822	Sheep meat [in the fat]	0.05	-	
MM	814	Goat meat		0.01	
ML	814	Goat milk		0.005	
MO	814	Goat edible offal of		0.1	
<b>Albendazole</b>					
MO	812	Cattle, Edible offal of	* 0.1	-	
MM	812	Cattle meat	* 0.1	-	
MO	814	Goat, Edible offal of	* 0.1	-	
MM	814	Goat meat	* 0.1	-	
MO	822	Sheep, Edible offal of	3	-	
MM	822	Sheep meat	0.2	-	
		Muscle	-	0.1	
		Fat	-	0.1	
		Milk	-	0.1	
		Liver	-	5	
		Kidney	-	5	
<b>Altrenogest</b>					
MM	818	Pig meat	* 0.005	-	
MO	818	Pig, Edible offal of	0.005	-	
<b>Amitraz</b>					
MO	107	Edible offal of cattle, pigs and sheep	0.5	0.2	
MM	97	Meat of cattle, pigs and sheep	0.1		
ML	106	Milks	0.1	* 0.01	
MM	812	Cattle meat		0.05	
MM	818	Pig meat		0.05	
MM	822	Sheep meat		0.1	
<b>Amoxicillin</b>					
ML	812	Cattle milk	* 0.01	-	
MO	105	Edible offal (mammalian)	* 0.01	-	
MM	95	Meat [mammalian]	* 0.01	-	
PO	111	Poultry, Edible offal of	* 0.01	-	
PM	110	Poultry meat	* 0.01	-	
ML	822	Sheep milk	* 0.01	-	
<b>Ampicillin</b>					
ML	812	Cattle milk	* 0.01	-	
MO	816	Horse, Edible offal of	* 0.01	-	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS							
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP	
MM	816	Horse meat	*	0.01	-		
<b>Amprolium</b>							
PE	112	Eggs		4	-		
PO	111	Poultry, Edible offal of		1	-		
PM	110	Poultry meat		0.5	-		
<b>Apramycin</b>							
MO	105	Edible offal (mammalian)		2	-		
MM	95	Meat [mammalian]	*	0.05	-		
PO	111	Poultry, Edible offal of		1	-		
PM	110	Poultry meat	*	0.05	-		
<b>Avilamycin</b>							
MO	818	Pig, edible offal of	T*	0.05			
MM	818	Pig meat	T*	0.05			
PO	111	Poultry, Edible offal of	*	0.05	-		
PM	110	Poultry meat	*	0.05	-		
<b>Avoparcin</b>							
MO	105	Edible offal (mammalian)	*	0.1	-		
MM	95	Meat [mammalian]	*	0.1	-		
ML	106	Milks	*	0.01	-		
PO	111	Poultry, Edible offal of	*	0.1	-		
PM	110	Poultry meat	*	0.1	-		
<b>Azaperone</b>							
MO	818	Pig, Edible offal of		0.2			
MM	818	Pig meat		0.2	0.06		
		Pig Fat		-	0.06		
		Pig Liver		-	0.1		
		Pig Kidney		-	0.1		
<b>Bacitracin</b>							
PO	840	Chicken, Edible offal of	*	0.5	-		
PF	840	Chicken fat	*	0.5	-		
PM	840	Chicken meat	*	0.5	-		
PE	112	Eggs	*	0.5	-		
ML	106	Milks	*	0.5	-		
<b>Benzocaine</b>							
		Abalone	*	0.5	-		
		Finfish	*	0.5	-		
<b>Benzyl G penicillin</b>							
MO	105	Edible offal (mammalian)	*	0.06	-		
MM	95	Meat [mammalian]	*	0.06	-		
ML	106	Milks	*	0.0015	-		
		Cattle Muscle		-	0.05		
		Cattle Liver		-	0.05		
		Cattle Kidney		-	0.05		
		Cattle Milk		-	0.004		

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
		Pig Muscle		-	0.05	
		Pig Kidney		-	0.05	
		Pig Liver		-	0.05	
<b>Carbadox</b>						
		Pig Muscle		-	0.005	
		Pig Liver		-	0.03	
<b>Carbetamide</b>						
MO	105	Edible offal (mammalian)	*	0.1	-	
PE	112	Eggs	*	0.1	-	
MM	95	Meat [mammalian]	*	0.1	-	
ML	106	Milks	*	0.1	-	
PO	111	Poultry, Edible offal of	*	0.1	-	
PM	110	Poultry meat	*	0.1	-	
<b>Ceftiofur</b>						
MO	812	Cattle, Edible offal of		2	-	
MF	812	Cattle fat		0.5	2	
MM	812	Cattle meat		0.1	-	
ML	812	Cattle milk		0.1	0.1	
		Cattle Muscle		-	1	
		Cattle Liver		-	2	
		Cattle Kidney		-	6	
		Pig Muscle		-	1	
		Pig Liver		-	2	
		Pig Fat		-	2	
		Pig Kidney		-	6	
<b>Cefuroxime</b>						
MM	812	Cattle meat	*	0.1	-	
MO	812	Cattle, Edible offal of	*	0.1	-	
ML	812	Cattle milk	*	0.1	0.05	5
<b>Cephalonium</b>						
MM	812	Cattle meat	*	0.1	-	
MO	812	Cattle, Edible offal of	*	0.1	-	
ML	812	Cattle milk	*	0.02	-	
<b>Cephapirin</b>						
MO	812	Cattle, edible offal of	*	0.02	-	
MM	812	Cattle meat	*	0.02	-	
ML	812	Cattle milk	*	0.01	-	
<b>Chlorhexidine</b>						
ML	106	Milks		0.05	-	
MO	822	Sheep, Edible offal of	*	0.5		
MF	822	Sheep fat	*	0.5		
MM	822	Sheep meat	*	0.5		

<b>CODEX APVMA - MRL TABLE; VETERINARY DRUGS</b>						
<b>CODE</b>		<b>COMMODITY</b>	<b>APVMA MRL (mg/kg)</b>		<b>CODEX MRL (mg/kg)</b>	<b>STEP</b>
<b>Chlortetracycline</b>						
MO	1280	Cattle, kidney		0.6	1.2	8
MO	1281	Cattle, liver		0.3	0.6	8
MM	812	Cattle meat		0.1	0.2	8
		Cattle Milk			0.1	8
PE	112	Eggs		0.2	0.4	
MO	1284	Pig, kidney		0.6	1.2	8
MO	1285	Pig, liver		0.3	0.6	8
MM	818	Pig meat		0.1	0.2	8
PO	111	Poultry, Edible offal of		0.6	-	
		Poultry Kidney			1.2	8
		Poultry Liver		-	0.6	8
PM	110	Poultry Meat		0.1	0.2	8
		Sheep Muscle		-	0.2	8
		Sheep Kidney		-	1.2	8
		Sheep Liver		-	0.6	8
		Prawn			0.1	
<b>Clavulanic acid</b>						
MO	812	Cattle, Edible offal of	*	0.01	-	
MM	812	Cattle meat	*	0.01	-	
ML	812	Cattle milk	*	0.01	-	
<b>Clenbuterol</b>						
		Cattle Milk		-	0.00005	8
		Cattle Muscle		-	0.0002	5
		Horse Muscle		-	0.0002	5
		Cattle Liver		-	0.0006	5
		Horse Liver		-	0.0006	5
		Cattle Kidney		-	0.0006	5
		Horse Kidney		-	0.0006	5
		Cattle Fat		-	0.0002	5
		Horse Fat		-	0.0002	5
<b>Clorsulon</b>						
MO	812	Cattle, Edible offal of	*	0.1		
MM	812	Cattle meat	*	0.1		
ML	812	Cattle Milk		1.5		
<b>Closantel</b>						
MO	822	Sheep, Edible offal of		5	-	
MM	822	Sheep meat		2	1.5	
		Sheep Liver		-	1.5	
		Sheep Fat		-	2	
		Sheep Kidney		-	5	
		Cattle Muscle		-	1	
		Cattle Liver		-	1	
		Cattle Fat		-	3	
		Cattle Kidney		-	3	

<b>CODEX APVMA - MRL TABLE; VETERINARY DRUGS</b>						
<b>CODE</b>		<b>COMMODITY</b>	<b>APVMA MRL (mg/kg)</b>		<b>CODEX MRL (mg/kg)</b>	<b>STEP</b>
<b>Cloxacillin</b>						
ML	812	Cattle milk	*	0.01	-	
<b>Coumaphos</b>						
MO	812	Cattle, Edible offal of		1	-	
MM	812	Cattle meat [in the fat]		1	-	
PE	112	Eggs		0.05	-	
MO	814	Goat, Edible offal of		0.5	-	
MM	814	Goat meat [in the fat]		0.5	-	
ML	106	Milks [in the fat]		0.1	-	
MO	818	Pig, Edible offal of		0.5	-	
MM	818	Pig meat [in the fat]		0.5	-	
PO	111	Poultry, Edible offal of		1	-	
PM	110	Poultry meat [in the fat]		1	-	
MO	822	Sheep, Edible offal of		0.5	-	
MM	822	Sheep meat [in the fat]		0.5	-	
<b>Cyhalothrin</b>						
MO	105	Edible offal (mammalian)	*	0.02	-	
PE	112	Eggs	*	0.02	-	
MM	95	Meat [mammalian][in the fat]		0.5	-	
ML	106	Milks [in the fat]		0.5	-	
PO	111	Poultry, Edible offal of	*	0.02	-	
PM	110	Poultry meat	*	0.02	-	
		Cattle Muscle		-	T 0.02	8
		Pig Muscle		-	T 0.02	8
		Sheep Muscle		-	T 0.02	8
		Cattle Liver		-	T 0.02	8
		Pig Liver		-	T 0.02	8
		Sheep Liver		-	T 0.02	8
		Cattle Kidney		-	T 0.02	8
		Pig Kidney		-	T 0.02	8
		Sheep Kidney		-	T 0.02	8
		Cattle Fat		-	T 0.4	8
		Pig Fat		-	T 0.4	8
		Sheep Fat		-	T 0.4	8
		Cattle Milk		-	T 0.03	8
<b>Cyfluthrin</b>						
MO	105	Edible offal (mammalian)	*	0.01	-	
PE	112	Eggs	*	0.01	-	
MF	100	Mammalian fats (except milk fat)		0.5	-	
MM	95	Meat [mammalian]		0.02	-	
ML	106	Milks		0.1	-	
PO	111	Poultry, Edible offal of	*	0.01	-	
PM	110	Poultry meat [in the fat]	*	0.01	-	
		Cattle Muscle		-	0.02	
		Cattle Liver		-	0.02	
		Cattle Kidney		-	0.02	
		Cattle Fat		-	0.2	
		Cattle Milk		-	0.04	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP	
<b>Cypermethrin</b>						
MO	812	Cattle, Edible offal of	0.05			
MM	812	Cattle meat [in the fat]	0.5	1		5
PE	112	Eggs	0.05			
MO	814	Goat, Edible offal of	0.05			
MM	814	Goat meat [in the fat]	0.5			
ML	106	Milks [in the fat]	1			
MO	818	Pig, Edible offal of	* 0.05			
MM	818	Pig meat [in the fat]	* 0.05			
PO	111	Poultry, Edible offal of	* 0.05			
PM	110	Poultry meat [in the fat]	* 0.05			
MO	822	Sheep, Edible offal of	0.05			
MM	822	Sheep meat [in the fat]	0.5	1		5
		Sheep and cattle muscle		0.05		5
		Sheep and cattle liver		0.05		5
		Sheep and cattle kidney		0.05		5
MM	95	Meat (from mammals other than marine mammals) fat		0.2		
ML	106	Milks [in the fat]		0.05		
MO	105	Edible offal (mammalian)		* 0.05		
PM	110	Poultry meat		* 0.05		
PE	112	Eggs		* 0.05		
<b>Deltamethrin</b>						
MO	812	Cattle, Edible offal of	0.1	-		
MM	812	Cattle meat [in the fat]	0.5	-		
ML	812	Cattle milk [in the fat]	0.5	-		
PE	112	Eggs	* 0.01	0.03		
MO	814	Goat, Edible offal of	0.1	-		
MM	814	Goat meat [in the fat]	0.1	-		
ML	814	Goat milk [in the fat]	0.2	-		
MM	818	Pig meat [in the fat]	0.1	-		
MO	818	Pig, edible offal of	* 0.01	-		
PM	110	Poultry meat [in the fat]	* 0.01	-		
PO	111	Poultry, edible offal of	* 0.01	-		
MO	822	Sheep, Edible offal of	0.1	-		
MM	822	Sheep meat [in the fat]	0.1	-		
ML	822	Sheep milk [in the fat]	0.2	-		
		Cattle Muscle	-	0.03		5
		Sheep Muscle	-	0.03		5
		Chicken Muscle	-	0.03		5
		Salmon Muscle	-	0.03		5
		Cattle Liver	-	0.05		5
		Sheep Liver	-	0.05		5
		Chicken Liver	-	0.05		5
		Cattle Kidney	-	0.05		5
		Sheep Kidney	-	0.05		5
		Chicken Kidney	-	0.05		5
		Cattle Fat	-	0.5		5
		Sheep Fat	-	0.5		5
		Chicken Fat	-	0.5		5
		Cattle Milk	-	0.03		5
MO	105	Edible offal Mammalian		0.05		
MM	95	Meat (from mammals other than marine mammals) fat		0.5		
ML	106	Milks		0.05		



CODEX APVMA - MRL TABLE; VETERINARY DRUGS					
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP
PE	122	Eggs		*	0.05
PM	110	Poultry meat (fat)			0.1
PO	111	Poultry, Edible offal of		*	0.02
<b>Dexamethasone</b>					
MO	812	Cattle, Edible offal of	0.1	-	
MM	812	Cattle meat	0.1	-	
ML	812	Cattle milk	* 0.05	-	
MO	816	Horse, Edible offal of	0.1	-	
MM	816	Horse meat	0.1	-	
MO	818	Pig, Edible offal of	0.1	-	
MM	818	Pig meat	0.1	-	
<b>Diclazuril</b>					
PO	840	Chicken, Edible offal of	1	-	
PM	840	Chicken meat	0.2	-	
		Sheep Muscle	-	0.5	
		Sheep Liver	-	3	
		Sheep Kidney	-	2	
		Sheep Fat	-	1	
		Rabbit Muscle	-	0.5	
		Rabbit Kidney	-	2	
		Rabbit Fat	-	1	
		Rabbit Liver	-	3	
		Poultry Muscle	-	0.5	
		Poultry Fat/Skin	-	1	
		Poultry Kidney	-	2	
		Poultry Liver	-	3	
<b>Dicyclanil</b>					
MF	822	Sheep fat	0.3	0.2	8
MO	1288	Sheep kidney	0.3	0.125	8
MO	1289	Sheep liver	0.3	0.125	8
MM	822	Sheep meat	0.3	0.15	8
<b>Dihydrostreptomycin</b>					
		Cattle Muscle	-	0.6	
		Cattle Liver	-	0.6	
		Cattle Kidney	-	1	
		Cattle Milk	-	0.2	
		Cattle Fat	-	0.6	
		Pig Muscle	-	0.6	
		Pig Liver	-	0.6	
		Pig Fat	-	0.6	
		Pig Kidney	-	1	
		Sheep Muscle	-	0.6	
		Sheep Liver	-	0.6	
		Sheep Kidney	-	1	
		Sheep Fat	-	0.6	
		Chicken Muscle	-	0.6	
		Chicken Liver	-	0.6	
		Chicken Kidney	-	1	
		Chicken Fat	-	0.6	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
<b>Dimetridazole</b>						
MO	818	Pig, Edible offal of	*	0.005		
MM	818	Pig meat	*	0.005		
PO	111	Poultry, Edible offal of	*	0.005		
PM	110	Poultry meat	*	0.005		
<b>Diminazene</b>						
		Cattle Muscle	-		0.5	
		Cattle Liver	-		12	
		Cattle Kidney	-		6	
		Cattle Milk	-		0.15	
<b>Doramectin</b>						
MO	812	Cattle, Edible offal of		0.1	-	
MF	812	Cattle fat		0.1	0.15	
MM	812	Cattle meat <sup>3</sup>		0.01	0.01	
ML	812	Cattle milk	T	0.06		
MO	1284	Pig, kidney		0.03	0.03	
MO	1285	Pig, liver		0.05	0.1	
MM	818	Pig meat [in the fat]		0.1	0.15	
MO	822	Sheep, Edible offal of		0.05	-	
MF	822	Sheep fat		0.1	-	
MM	822	Sheep meat		0.02	-	
		Cattle Liver	-		0.1	
		Cattle Kidney	-		0.03	
		Pig meat			0.005	
<b>Eprinomectin</b>						
ML	812	Cattle milk		0.03	-	
MM	812	Cattle meat		0.1	0.1	8
MF	812	Cattle fat		0.5	0.25	8
MO	812	Cattle, Edible offal of		2	-	
MM	813	Deer Meat		0.1	-	
		Deer, edible offal of		2	-	
		Cattle Liver	-		2	8
		Cattle Kidney	-		0.3	8
		Cattle Milk	-		0.02	8
<b>Erythromycin</b>						
MO	105	Edible offal (mammalian)	*	0.3	-	
MM	95	Meat [mammalian]	*	0.3	-	
ML	106	Milks	*	0.04	-	
PO	111	Poultry, Edible offal of	*	0.3	-	
PM	110	Poultry meat	*	0.3	-	
<b>Febantel</b>						
		Cattle Muscle	-		0.1	
		Cattle Kidney	-		0.1	
		Cattle Fat	-		0.1	
		Cattle Liver	-		0.5	

3 High concentration of residues at the injection site over a 35-day period after subcutaneous or intramuscular administration of the drug at the recommended dose.

<b>CODEX APVMA - MRL TABLE; VETERINARY DRUGS</b>						
	<b>CODE</b>	<b>COMMODITY</b>	<b>APVMA MRL (mg/kg)</b>		<b>CODEX MRL (mg/kg)</b>	<b>STEP</b>
		Cattle Milk	-		0.1	
		Pig Muscle	-		0.1	
		Pig Fat	-		0.1	
		Pig Liver	-		0.5	
		Pig Kidney	-		0.1	
		Sheep Muscle	-		0.1	
		Sheep Liver	-		0.5	
		Sheep Milk	-		0.1	
		Sheep Fat	-		0.1	
		Sheep Kidney	-		0.1	
		Goat Muscle	-		0.1	
		Goat Kidney	-		0.1	
		Goat Fat	-		0.1	
		Goat Liver	-		0.5	
		Horse Muscle	-		0.1	
		Horse Kidney	-		0.1	
		Horse Liver	-		0.5	
		Horse Fat	-		0.1	
		<b>Fenbendazole</b>				
	MO 812	Cattle, Edible offal of	*	0.1		
	MM 812	Cattle meat	*	0.1	0.1	
	MO 814	Goat, Edible offal of		0.5		
	MM 814	Goat meat		0.5	0.1	
	ML 106	Milks		0.1		
	MO 822	Sheep, Edible offal of		0.5		
	MM 822	Sheep meat		0.5	0.1	
		Cattle Kidney	-		0.1	
		Cattle Fat	-		0.1	
		Cattle Liver	-		0.5	
		Cattle Milk	-		0.1	
		Pig Muscle	-		0.1	
		Pig Fat	-		0.1	
		Pig Liver	-		0.5	
		Pig Kidney	-		0.1	
		Sheep Liver	-		0.5	
		Sheep Milk	-		0.1	
		Sheep Fat	-		0.1	
		Sheep Kidney	-		0.1	
		Goat Kidney	-		0.1	
		Goat Fat	-		0.1	
		Goat Liver	-		0.5	
		Horse Muscle	-		0.1	
		Horse Kidney	-		0.1	
		Horse Liver	-		0.5	
		Horse Fat	-		0.1	
		<b>Flavophospholipol</b>				
	MF 812	Cattle fat	*	0.01	-	
	MO 1280	Cattle kidney	*	0.01	-	
	MO 1281	Cattle liver	*	0.01	-	
	MM 812	Cattle meat	*	0.01	-	
	ML 812	Cattle milk	T*	0.01	-	
	PE 112	Eggs	*	0.02	-	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS					
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP
<b>Florfenicol</b>					
MO	1280	Cattle kidney	0.5		
MO	1281	Cattle liver	3		
MM	812	Cattle meat	0.3		
		Pig fat/skin	1		
MO	1284	Pig kidney	1		
MO	1285	Pig liver	3		
MM	818	Pig meat	0.5		
<b>Fluazuron</b>					
MO	812	Cattle, Edible offal of	0.5	-	
MM	812	Cattle meat [in the fat]	7	7	
		Cattle Muscle	-	0.2	
		Cattle Liver	-	0.5	
		Cattle Kidney	-	0.5	
<b>Flubendazole</b>					
		Pig Muscle	-	0.01	
		Pig Liver	-	0.01	
		Poultry Muscle	-	0.2	
		Poultry Liver	-	0.5	
		Poultry Eggs	-	0.4	
<b>Flumequine</b>					
		Cattle Muscle	-	0.5	
		Pig Muscle	-	0.5	
		Sheep Muscle	-	0.5	
		Chicken Muscle	-	0.5	
		Trout Muscle	-	0.5	
		Cattle Liver	-	0.5	
		Pig Liver	-	0.5	
		Sheep Liver	-	0.5	
		Chicken Liver	-	0.5	
		Cattle Kidney	-	3	
		Pig Kidney	-	3	
		Sheep Kidney	-	3	
		Chicken Kidney	-	3	
		Cattle Fat	-	1	
		Pig Fat	-	1	
		Sheep Fat	-	1	
		Chicken Fat	-	1	
<b>Flumethrin</b>					
		Honey	T* 0.005	-	
MO	816	Horse, Edible offal of	0.1	-	
MM	816	Horse meat	0.1	-	
MO	812	Cattle, Edible offal of	T 0.05	-	
MM	812	Cattle meat [in the fat]	T 0.2	0.2	
ML	106	Milks	T 0.05	0.05	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS					
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP
<b>Flunixin</b>					
MO	1280	Cattle kidney	0.02	-	
MO	1281	Cattle liver	0.02	-	
VL	812	Cattle meat [in the fat]	0.02	-	
<b>Imidocarb</b>					
MO	812	Cattle, Edible offal of	5		
MM	812	Cattle meat	1	0.3	5/8
ML	812	Cattle milk	0.2	0.05	5/8
		Cattle liver		1.5	5/8
		Cattle kidney		2	5/8
		Cattle fat		0.05	5/8
<b>Isoeugenol</b>					
Group 040-042		Fish (whole commodity)	100		
<b>Isometamidium</b>					
		Cattle Muscle	-	0.1	
		Cattle Liver	-	0.5	
		Cattle Kidney	-	1	
		Cattle Fat	-	0.1	
		Cattle Milk	-	0.1	
<b>Ivermectin</b>					
MO	1280	Cattle, kidney	* 0.01	-	
MO	1281	Cattle, liver	0.1	0.1	
MM	812	Cattle meat [in the fat]	0.04	0.04	
ML	812	Cattle milk	0.05	0.01	
		Deer kidney	* 0.01	-	
		Deer liver	* 0.01	-	
MM	813	Deer meat [in the fat]	* 0.01	-	
MO	816	Horse, Edible offal of	* 0.01	-	
MM	816	Horse meat	* 0.01	-	
MO	1284	Pig, kidney	* 0.01	-	
MO	1285	Pig, liver	* 0.01	0.015	
MM	818	Pig meat [in the fat]	0.02	0.02	
MO	1288	Sheep, kidney	* 0.01	-	
MO	1289	Sheep liver	0.015	0.015	
MM	822	Sheep meat [in the fat]	0.02	0.02	
<b>Ketoprofen</b>					
MO	812	Cattle, Edible offal of	* 0.05	-	
MM	812	Cattle meat	* 0.05	-	
ML	812	Cattle milk	* 0.05	-	
<b>Kitasamycin</b>					
PE	112	Eggs	* 0.2	-	
MO	818	Pig, Edible offal of	* 0.2	-	
MM	818	Pig meat	* 0.2	-	
PO	111	Poultry, Edible offal of	* 0.2	-	
PM	110	Poultry meat	* 0.2	-	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
<b>Lasalocid</b>						
ML	812	Cattle milk	*	0.01	-	
MO	105	Edible offal (mammalian)		0.7	-	
PE	112	Eggs	T*	0.05	-	
MM	95	Meat [mammalian]	*	0.05	-	
PO	111	Poultry, Edible offal of	T	0.7	-	
PM	110	Poultry meat	T*	0.05	-	
		Poultry skin/fat	T	1.2		
<b>Levamisole</b>						
MO	105	Edible offal (mammalian)		1	-	
PE	112	Eggs		1	-	
ML	814	Goat milk		0.1	-	
MM	95	Meat [mammalian]		0.1	-	
ML	106	Milks [except goat milk]		0.3	-	
PO	111	Poultry, Edible offal of		0.1	-	
PM	110	Poultry meat		0.1	0.1	
		Cattle Muscle		-	0.01	
		Liver		-	0.1	
		Fat		-	0.01	
		Kidney		-	0.01	
		Pig Muscle		-	0.01	
		Liver		-	0.1	
		Kidney		-	0.01	
		Fat		-	0.01	
		Sheep Muscle		-	0.01	
		Liver		-	0.1	
		Fat		-	0.01	
		Kidney		-	0.01	
		Poultry Liver		-	0.1	
		Poultry Fat		-	0.01	
		Poultry Kidney		-	0.01	
<b>Lincomycin</b>						
ML	812	Cattle milk	*	0.02	-	
PE	112	Eggs		0.2	-	
MO	105	Edible offal (mammalian) [except sheep, edible offal of]		0.2	-	
ML	814	Goat milk	*	0.1	-	
MM	95	Meat [mammalian] [except sheep meat]		0.2	-	
PO	111	Poultry, Edible offal of		0.1	-	
PM	110	Poultry meat		0.1		
		Cattle Muscle		-	T 0.1	5/8
		Pig Muscle		-	0.1	5/8
		Sheep Muscle		-	T 0.1	5/8
		Chicken Muscle		-	T 0.1	5/8
		Cattle Liver		-	T 0.5	5/8
		Pig Liver		-	0.5	5/8
		Sheep Liver		-	T 0.5	5/8
		Chicken Liver		-	T 0.5	5/8
		Cattle Kidney		-	T 1.5	5/8
		Pig Kidney		-	1.5	5/8
		Sheep Kidney		-	T 1.5	5/8
		Chicken Kidney		-	T 1.5	5/8

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP	
		Cattle Fat	-	T 0.1	5/8	
		Pig Fat	-	0.1	5/8	
		Sheep Fat	-	T 0.1	5/8	
		Chicken Fat	-	T 0.1	5/8	
		Cattle Milk	-	0.15	5/8	
<b>Maduramicin</b>						
PO	111	Poultry, Edible offal of	1	-		
PM	110	Poultry meat	0.1	-		
<b>Mebendazole</b>						
MO	105	Edible offal (mammalian)	* 0.02	-		
MM	95	Meat [mammalian]	* 0.02	-		
ML	106	Milks	0.02	-		
<b>Melengestrol acetate</b>						
		Cattle Liver	-	T 0.002	5	
		Cattle Fat	-	T 0.005	5	
<b>Meloxicam</b>						
MO	1280	Cattle, kidney	0.2	-		
MO	1281	Cattle, liver	0.1	-		
MM	812	Cattle meat	* 0.01	-		
ML	812	Cattle milk	0.005	-		
		Pig meat	0.02			
		Pig skin/fat	0.1			
		Pig liver	* 0.01			
		Pig kidney	* 0.01			
<b>Monensin</b>						
MO	812	Cattle, Edible offal of	* 0.05	-		
MM	812	Cattle meat	* 0.05	-		
ML	812	Cattle milk	* 0.01	-		
MO	814	Goat, Edible offal of	* 0.05	-		
MM	814	Goat meat	* 0.05	-		
PO	111	Poultry, Edible offal of	* 0.5	-		
PM	110	Poultry meat [in the fat]	* 0.5	-		
<b>Morantel</b>						
MO	812	Cattle, Edible offal of	2	-		
MO	814	Goat, Edible offal of	2	-		
MM	95	Meat [mammalian]	0.3	-		
ML	106	Milks	* 0.1	-		
MO	818	Pig, Edible offal of	5	-		
MO	822	Sheep, Edible offal of	2	-		
<b>Moxidectin</b>						
MO	812	Cattle, Edible offal of	0.5	-		
MM	812	Cattle meat [in the fat]	1	0.5		
ML	812	Cattle milk [in the fat]	2	-		
		Deer, Edible offal of	0.2	-		

<b>CODEX APVMA - MRL TABLE; VETERINARY DRUGS</b>						
<b>CODE</b>		<b>COMMODITY</b>	<b>APVMA MRL (mg/kg)</b>		<b>CODEX MRL (mg/kg)</b>	<b>STEP</b>
MM	183	Deer meat [in the fat]		1	0.5	
MO	822	Sheep, Edible offal of		0.05	0.05	
MM	822	Sheep meat [in the fat]		0.5	0.5	
		Cattle Muscle		-	0.02	
		Cattle Liver		-	0.1	
		Cattle Kidney		-	0.05	
		Sheep Liver		-	0.1	
		Sheep Kidney		-	0.05	
		Deer Muscle		-	0.02	
		Deer Liver		-	0.1	
		Deer Kidney		-	0.05	
<b>Naphthalophos</b>						
MO	814	Goat, Edible offal of	*	0.1	-	
MM	814	Goat meat	*	0.1	-	
MO	822	Sheep, Edible offal of	*	0.01	-	
MM	822	Sheep meat	*	0.01	-	
<b>Narasin</b>						
MO	812	Cattle, Edible offal of		0.05		
MM	812	Cattle meat		0.05		
PO	111	Poultry, Edible offal of		0.1		
PM	110	Poultry meat		0.1		
<b>Neomycin</b>						
MO	105	Edible offal (mammalian)	*	0.5	-	
PE	112	Eggs	T	0.5	0.5	
MF	100	Mammalian fats (except milk fats)	T	0.5	0.5	
MM	95	Meat [mammalian]	T	0.5	0.5	
ML	106	Milks		0.5		
PM	110	Poultry meat	T	0.5	0.5	
		Poultry liver	T	0.5	0.5	
		Poultry Kidney	T	10	10	
		Cattle Liver	T	0.5	0.5	8
		Cattle Milk			1.5	8
		Cattle Kidney	T	10	10	8
		Pig Kidney	T	10	10	
		Pig Liver	T	0.5	0.5	
		Sheep Kidney	T	10	10	
		Sheep Liver	T	0.5	0.5	
		Goat Kidney	T	10	10	
		Goat Liver	T	0.5	0.5	
		Chicken Fat		-	0.5	
		Turkey Fat		-	0.5	
		Duck Fat		-	0.5	
<b>Nicarbazin</b>						
PO	111	Poultry, Edible offal of		20	-	
PM	110	Poultry meat		5	-	
		Chicken Muscle		-	0.2	
		Chicken Liver		-	0.2	
		Chicken Kidney		-	0.2	
		Chicken Fat/Skin		-	0.2	



CODEX APVMA - MRL TABLE; VETERINARY DRUGS					
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP
<b>Nitroxylin</b>					
MO	812	Cattle, Edible offal of	1		
MM	812	Cattle meat	1		
MO	814	Goat, Edible offal of	1		
MM	814	Goat meat	1		
MO	822	Sheep, Edible offal of	1		
MM	822	Sheep meat	1		
<b>Norgestomet</b>					
MO	105	Edible offal (mammalian)	* 0.0001	-	
MM	95	Meat [mammalian]	* 0.0001	-	
<b>Novobiocin</b>					
MO	812	Cattle, Edible offal of	* 0.1	-	
MM	812	Cattle meat	* 0.1	-	
ML	812	Cattle milk	* 0.1	-	
<b>Olaquinox</b>					
MO	818	Pig, Edible offal of	0.3	-	
MM	818	Pig meat	0.3	-	
PO	111	Poultry, Edible offal of	0.3	-	
PM	110	Poultry meat	0.3	-	
<b>Oleandomycin</b>					
MO	105	Edible offal (mammalian)	* 0.1	-	
MM	95	Meat [mammalian]	* 0.1	-	
<b>Oxfendazole</b>					
MO	105	Edible offal (mammalian)	3	-	
MM	95	Meat [mammalian]	* 0.1	0.1	
ML	106	Milks	0.1	0.1	
		Cattle Kidney	-	0.1	
		Cattle Fat	-	0.1	
		Cattle Liver	-	0.5	
		Pig Fat	-	0.1	
		Pig Liver	-	0.5	
		Pig Kidney	-	0.1	
		Sheep Liver	-	0.5	
		Sheep Fat	-	0.1	
		Sheep Kidney	-	0.1	
		Goat Fat	-	0.1	
		Goat Liver	-	0.5	
		Horse Kidney	-	0.1	
		Horse Liver	-	0.5	
		Horse Fat	-	0.1	
<b>Oxolinic acid</b>					
WD	121	Salmon, Pacific	* 0.01		

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
<b>Oxytetracycline</b>						
		Honey	T	0.3	-	
MO	98	Kidney of cattle, goats, pigs and sheep		0.6	-	
MO	99	Liver of cattle, goats, pigs and sheep		0.3	-	
MM	95	Meat [mammalian]		0.1	-	
ML	106	Milks		0.1	0.1	
PO	111	Poultry, Edible offal of		0.6	-	
PM	110	Poultry Meat		0.1	0.2	8
		Poultry Eggs		-	0.4	8
		Poultry Kidney		-	1.2	8
		Poultry Liver		-	0.6	8
		Salmonids	T*	0.2	-	
		Cattle Milk		-	0.1	8
		Cattle Muscle		-	0.2	8
		Cattle Liver		-	0.6	8
		Cattle Kidney		-	0.6	
		Pig Muscle		-	0.2	8
		Pig Kidney		-	1.2	8
		Pig Liver		-	0.6	8
		Sheep Milk		-	0.1	8
		Sheep Muscle		-	0.2	8
		Sheep Liver		-	0.6	8
		Sheep Kidney		-	1.2	8
		Chicken Kidney		-	0.6	
		Chicken Eggs		-	0.2	
		Chicken Liver		-	0.3	
		Turkey Liver		-	0.3	
		Turkey Kidney		-	0.6	
		Fish Muscle		-	0.2	8
		Fish Muscle		-	0.1	
		Giant Prawn - Not specified. Penaeus monodon.		-	0.2	8
		Giant Prawn - Not specified. Penaeus monodon.		-	0.1	8
<b>Praziquantel</b>						
MO	822	Sheep, Edible offal, of	*	0.05	-	
MM	822	Sheep meat	*	0.05	-	
<b>Procaine penicillin</b>						
MO	105	Edible offal (mammalian)	*	0.1	-	
MM	95	Meat [mammalian]	*	0.1	-	
ML	106	Milks	*	0.0025	0.004	
		Cattle Muscle		-	0.05	
		Cattle Liver		-	0.05	
		Cattle Kidney		-	0.05	
		Pig Muscle		-	0.05	
		Pig Kidney		-	0.05	
		Pig Liver		-	0.05	
		Chicken Muscle		-	0.05	
		Chicken Kidney		-	0.05	
		Chicken Liver		-	0.05	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP	
<b>Ractopamine</b>						
MF	812	Cattle fat	T* 0.02	0.01	4	
MO	1280	Cattle kidney	T 0.1	0.09	4	
MM	812	Cattle meat	T* 0.02	0.01	4	
		Cattle liver		0.04	4	
MF	818	Pig fat	T 0.02	0.01	4	
MO	1284	Pig, kidney	T 0.1	0.09	4	
MO	1285	Pig, liver	T 0.05	0.04	4	
MM	818	Pig meat	T 0.02	0.01	4	
<b>Salinomycin</b>						
MO	812	Cattle, Edible offal of	0.5	-		
MM	812	Cattle meat	* 0.05	-		
PE	112	Eggs	* 0.02	-		
MO	818	Pig, Edible offal of	* 0.1	-		
MM	818	Pig meat	* 0.1	-		
PO	111	Poultry, Edible offal of	0.5	-		
PM	110	Poultry meat	0.1	-		
<b>Semduramicin</b>						
PM	840	Chicken meat	* 0.05	-		
		Chicken liver	0.5	-		
		Chicken kidney	0.2	-		
		Chicken fat/skin	0.5	-		
<b>Spectinomycin</b>						
MO	105	Edible offal (mammalian) [except sheep, edible offal of]	2	-		
PE	112	Eggs	* 2	2		
ML	814	Goat milk	* 1	-		
MM	95	Meat [mammalian] [except sheep meat]	* 1	-		
PO	111	Poultry, edible offal of	* 1	-		
PM	110	Poultry meat	1	-		
		Cattle Muscle	-	0.5		
		Cattle Liver	-	2		
		Cattle Kidney	-	5		
		Cattle Fat	-	2		
		Cattle Milk	-	0.2		
		Pig Muscle	-	0.5		
		Pig Kidney	-	5		
		Pig Fat	-	2		
		Pig Liver	-	2		
		Sheep Muscle	-	0.5		
		Sheep Kidney	-	5		
		Sheep Fat	-	2		
		Sheep Liver	-	2		
		Chicken Muscle	-	0.5		
		Chicken Fat	-	2		
		Chicken Kidney	-	5		
		Chicken Liver	-	2		

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
<b>Spiramycin</b>						
MO	818	Pig, Edible offal of	*	1	-	
MM	818	Pig meat	*	0.1	0.2	
PO	111	Poultry, Edible offal of	*	1	-	
PM	110	Poultry meat	*	0.1	-	
		Cattle Muscle		-	0.2	
		Cattle Liver		-	0.6	
		Cattle Kidney		-	0.3	
		Cattle Fat		-	0.3	
		Cattle Milk		-	0.2	
		Pig Kidney		-	0.3	
		Pig Fat		-	0.3	
		Pig Liver		-	0.6	
		Chicken Muscle		-	0.2	
		Chicken Fat		-	0.3	
		Chicken Kidney		-	0.8	
		Chicken Liver		-	0.6	
<b>Streptomycin</b>						
MO	105	Edible offal (mammalian)	*	0.3	-	
MM	95	Meat [mammalian]	*	0.3	-	
ML	106	Milks	*	0.2	T 0.2	
		Cattle Muscle		-	T 0.5	
		Cattle Liver		-	T 0.5	
		Cattle Kidney		-	T 1	
		Cattle Fat		-	T 0.5	
		Pig Muscle		-	T 0.5	
		Pig Liver		-	T 0.5	
		Pig Fat		-	T 0.5	
		Pig Kidney		-	T 1	
		Sheep Muscle		-	T 0.5	
		Sheep Liver		-	T 0.5	
		Sheep Kidney		-	T 1	
		Sheep Fat		-	T 0.5	
		Chicken Muscle		-	T 0.5	
		Chicken Liver		-	T 0.5	
		Chicken Kidney		-	T 1	
		Chicken Fat		-	T 0.5	
<b>Sulphadiazine</b>						
ML	812	Cattle milk		0.1	-	
MO	105	Edible offal (mammalian)		0.1	-	
MM	95	Meat [mammalian]		0.1	-	
PO	111	Poultry, Edible offal of		0.1	-	
PM	110	Poultry meat		0.1	-	
<b>Sulphadimidine</b>						
MO	105	Edible offal (mammalian)		0.1	-	
MM	95	Meat [mammalian]		0.1	-	
PO	111	Poultry [except Turkey], Edible offal of		0.1	-	
PM	110	Poultry meat		0.1	-	
PO	848	Turkey, Edible offal of		0.2	-	
		Cattle Milk		-	0.025	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
		Muscle		-	0.1	
		Liver		-	0.1	
		Kidney		-	0.1	
		Fat		-	0.1	
<b>Sulphadoxine</b>						
ML	812	Cattle milk	*	0.1	-	
MO	105	Edible offal (mammalian)	*	0.1	-	
MM	95	Meat (mammalian)	*	0.1	-	
<b>Sulphaquinoxaline</b>						
PO	111	Poultry, Edible offal of	T	0.1	-	
PM	110	Poultry meat	T	0.1	-	
<b>Sulphatroxazole</b>						
ML	812	Cattle milk		0.1	-	
MO	105	Edible offal (mammalian)		0.1	-	
MM	95	Meat [mammalian]		0.1	-	
<b>Tetracycline</b>						
ML	106	Milks	*	0.1	-	
		Cattle Muscle		-	0.2	8
		Pig Muscle		-	0.2	8
		Sheep Muscle		-	0.2	8
		Poultry Muscle		-	0.2	8
		Cattle Liver		-	0.6	8
		Pig Liver		-	0.6	8
		Sheep Liver		-	0.6	8
		Poultry Liver		-	0.6	8
		Cattle Kidney		-	12	8
		Pig Kidney		-	12	8
		Sheep Kidney		-	12	8
		Poultry Kidney		-	12	8
		Cattle Milk		-	0.1	8
		Sheep Milk		-	0.1	8
		Poultry Eggs		-	0.4	8
<b>Thiabendazole</b>						
MO	105	Edible offal (mammalian)		0.2	-	
MM	95	Meat [mammalian]		0.2	-	
ML	106	Milks		0.05	0.2	
		Cattle Muscle		-	0.1	
		Cattle Liver		-	0.3	
		Cattle Fat		-	0.1	
		Cattle Kidney		-	1	
		Pig Muscle		-	0.1	
		Pig Liver		-	0.1	
		Pig Kidney		-	0.1	
		Pig Fat		-	0.1	
		Sheep Muscle		-	0.1	
		Sheep Liver		-	0.1	
		Sheep Fat		-	0.1	
		Sheep Kidney		-	0.1	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS						
CODE		COMMODITY	APVMA MRL (mg/kg)		CODEX MRL (mg/kg)	STEP
		Goat Muscle		-	0.1	
		Goat Liver		-	0.1	
		Goat Fat		-	0.1	
		Goat Kidney		-	0.1	
<b>Thiamphenicol</b>						
		Pig Muscle			T 0.05	6
		Fish Muscle			T 0.05	6
		Pig Liver			T 0.1	6
		Pig Kidney			T 0.5	6
		Pig Fat			T 0.05	6
<b>Tiamulin</b>						
MO	818	Pig, Edible offal of	*	0.1		
MM	818	Pig meat	*	0.1		
PO	111	Poultry, Edible offal of	*	0.1		
PM	110	Poultry meat	*	0.1		
<b>Tilmicosin</b>						
MO	812	Cattle, Edible offal of		1	-	
MM	812	Cattle meat	*	0.05	0.1	
ML	812	Cattle milk	T*	0.025	-	
MO	818	Pig, Edible offal of		1	-	
MM	818	Pig meat		0.05	0.1	
		Cattle Liver		-	1	
		Cattle Kidney		-	0.3	
		Cattle Fat		-	0.1	
		Pig Kidney		-	1	
		Pig Fat		-	0.1	
		Pig Liver		-	1.5	
		Sheep Muscle		-	0.1	
		Sheep Fat		-	0.1	
		Sheep Milk		-	T 0.05	
		Sheep Kidney		-	0.3	
		Sheep Liver		-	1	
<b>Tolfenamic acid</b>						
MO	1280	Cattle, kidney	*	0.01	-	
MO	1281	Cattle, liver	*	0.01	-	
MM	812	Cattle meat		0.05	-	
ML	812	Cattle milk		0.05	-	
MO	1284	Pig, kidney	*	0.01	-	
MO	1285	Pig, liver		0.1	-	
MM	818	Pig meat	*	0.01	-	
<b>Trenbolone acetate</b>						
MO	812	Cattle, Edible offal of		0.01	-	
MM	812	Cattle meat		0.002	0.002	
		Cattle Liver		-	0.01	

CODEX APVMA - MRL TABLE; VETERINARY DRUGS					
CODE		COMMODITY	APVMA MRL (mg/kg)	CODEX MRL (mg/kg)	STEP
<b>Trichlorfon (Metrifonote)</b>					
		Cattle Milk	0.05	T 0.05	7
<b>Triclabendazole</b>					
		Fat (mammalian)	1		
		Kidney (mammalian)	1	-	
		Liver (mammalian)	2	-	
MM	95	Meat (mammalian)	0.5	-	
		Cattle Muscle	-	0.2	
		Cattle Liver	-	0.3	
		Cattle Fat	-	0.1	
		Cattle Kidney	-	0.3	
		Sheep Muscle	-	0.1	
		Sheep Liver	-	0.1	
		Sheep Fat	-	0.1	
		Sheep Kidney	-	0.1	
<b>Triclopyr</b>					
This is a herbicide?					
MO	812	Cattle, Edible offal of	5	-	
MM	812	Cattle meat [in the fat]	0.2	-	
MO	814	Goat, Edible offal of	5	-	
MM	814	Goat meat [in the fat]	0.2	-	
ML	106	Milks [in the fat]	0.1	-	
MO	822	Sheep, Edible offal of	5	-	
MM	822	Sheep meat [in the fat]	0.2	-	
<b>Trimethoprim</b>					
ML	812	Cattle milk	0.05	-	
MO	105	Edible offal (mammalian)	0.05	-	
MM	95	Meat [mammalian]	0.05	-	
PO	111	Poultry, Edible offal of	0.05	-	
PM	110	Poultry meat	0.05	-	
<b>Tylosin</b>					
MO	812	Cattle, Edible offal of	* 0.1	-	
MM	812	Cattle meat	* 0.1	-	
PE	112	Eggs	* 0.2	-	
ML	106	Milks	* 0.05	-	
MO	818	Pig, Edible offal of	* 0.2	-	
MF	818	Pig fat	* 0.1	-	
MM	818	Pig meat	* 0.2	-	
PO	111	Poultry, Edible offal of	* 0.2	-	
PF	111	Poultry fats	* 0.1	-	
PM	110	Poultry meat	* 0.2	-	
<b>Virginiamycin</b>					
MO	812	Cattle, Edible offal of	0.2	-	
MF	812	Cattle fat	0.2	-	
MM	812	Cattle meat	* 0.1	-	

<b>CODEX APVMA - MRL TABLE; VETERINARY DRUGS</b>						
<b>CODE</b>		<b>COMMODITY</b>	<b>APVMA MRL (mg/kg)</b>		<b>CODEX MRL (mg/kg)</b>	<b>STEP</b>
ML	812	Cattle milk		0.1	-	
PE	112	Eggs	*	0.1	-	
MO	818	Pig, Edible offal of		0.2	-	
MF	818	Pig fat		0.2	-	
MM	818	Pig meat	*	0.1	-	
PO	111	Poultry, Edible offal of		0.2	-	
PF	111	Poultry fats		0.2	-	
PM	110	Poultry meat	*	0.1	-	
MO	822	Sheep, Edible offal of	*	0.2	-	
MM	822	Sheep meat	*	0.1	-	
<b>Zeranol</b>						
MO	812	Cattle, Edible offal of		0.02	-	
MM	812	Cattle meat		0.005	0.002	
		Cattle Liver		-	0.01	

## CANADA

### 5. Information on veterinary drugs without ADI/MRL

The 15<sup>th</sup> CCRVDF agreed to establish a Working Group to develop recommendations on how to deal with compounds without an ADI or MRL. Canada provides the following information as requested in order to assist the Working Group to carry out its tasks:

- i) all compounds with no Codex MRLs used at national level for food animals

The list of compounds with no Codex MRLs approved for use in Canada for food animals is provided as follows:

ampicillin, amprolium, apramycin, arsanilic acid, buquinolate, cephalixin, clopidol, decoquinat, erythromycin, florfenicol, flunixin, halofuginone, hydrocortisone, ketoprofen, lasalocid, maduramicin, monensin, morantel tartrate, narasin, nitarson, novobiocin, polymyxin B, pyrantel tartrate, robenidine hydrochloride, roxarsone, salinomycin, sulfacetamide, sulfabenzamide, sulfachlorpyridazine, sulfadiazine, sulfadimethoxine, sulfadoxine, sulfaethoxypyridazine, sulfaguanidine, sulfamerazine, sulfanilamide, sulfanitran, sulfapyridine, sulfaquinoxaline, sulfathiazole, teflubenzuron, tiamulin, trimethoprim, tylosin, zoalene

- ii) compounds in use that raise health concerns

Canada has initiated the process to ban the sale of carbadox for administration to food producing animals. Carbadox remains a health concern because of the risk to human health from residues resulting from its potential misuse .

For the past few years, Canada has dealt with issues of trace amounts of banned drug substances such as chloramphenicol and nitrofurans detected in imported food products such as honey and shrimp. Food products which contain detectable residues of chloramphenicol and nitrofurans are prohibited for sale in Canada.

- iii) compounds in use that create trade problems; compounds recommended for inclusion in a negative list and the reason for the inclusion in that list

Hormonal growth promoters for use in beef cattle have been trade issues around the world. They are approved for use in Canada and the United States, however, the use of hormonal growth promoters is banned in the European Union (EU). There are six hormonal growth promoters approved in Canada for use in beef. Three are natural - progesterone, testosterone and esterdiol-17 $\beta$ ; and three are synthetic - trenbolone acetate, zeranol and melengestrol acetate.

Canada currently has six compounds on the negative list. Chloramphenicol, 5-nitrofurantoin, clenbuterol, 5-nitroimidazole, diethylstilbesterol and carbadox are banned or in the process of being banned for sale for



administration to food producing animals. Any levels of these drug residues are prohibited in food products of animal origin for sale in Canada because of the human health risk associated with these compounds.

iv) national or regional MRLs (if any)

The Veterinary Drugs Directorate of Health Canada currently provides a list of all approved MRLs for drug compounds including the compounds for which there are no Codex MRLs listed above.

v) other tolerances or application of an analytical limit of detection or determination

The attached Table includes the detection limits and reporting limits of a list of veterinary drugs primarily in edible tissues from methods validated for use by a Canadian Food Inspection Agency (CFIA) laboratory in Canada:

<b>Performance Standards of Methods Validated for use by CFIA Saskatoon Laboratory (includes some currently archived methods): February, 2005</b>			
<b>Analyte</b>	<b>Species/Matrix</b>	<b>Detection Limit (ng/g)</b>	<b>Reporting Limit (ng/g)</b>
Abamectin	bovine/equine/ovine/porcine liver, muscle	2	2
Acepromazine	porcine kidney and muscle	1 (LOQ)	1
Albendazole - measured as 2-aminosulfone metabolite	bovine/porcine/ovine liver & muscle	50	100
Azaperol	porcine kidney and muscle	1 (LOQ)	1
Azaperone (azaperol metabolite)	porcine kidney and muscle	1 (LOQ)	1
Bacitracin - measured as Bacitracin A	porcine liver, kidney & muscle	100 (LOQ)	100
Brombuterol	bovine/equine retina	5	5
Brombuterol	bovine/equine/porcine liver	0.5	0.5
Brombuterol	urine	1	1
Carazolol	porcine kidney and muscle	1 (LOQ)	1
Carbadox- measured as desoxycarbadox	porcine liver & muscle, bovine muscle	0.05 (LOQ)	0.05
Carbadox- measured as QCA	porcine liver & muscle, bovine muscle	0.5	0.5
Carbendazim	bovine/porcine/ovine liver & muscle	50	100
Ceftiofur	bovine/porcine kidney, muscle	50	75
Chloramphenicol	liver, kidney, muscle (various species)	0.2	0.2
Chlormadinone acetate	bovine/porcine fat	5	10
Chlorpromazine	porcine kidney and muscle	1 (LOQ)	1
Chlortetracycline	kidney, liver, lung, muscle, whole egg	50	100
Cimaterol	bovine/equine retina	5	5
Cimaterol	bovine/equine/porcine liver	0.5	0.5
Cimaterol	urine	1	1
Ciprofloxacin	avian liver, muscle	2	5
Ciprofloxacin	bovine/porcine kidney, liver, muscle	2	5
Clenbuterol	bovine/equine retina	5	5
Clenbuterol	bovine/equine/porcine liver	0.5	0.5
Clenbuterol	urine	1	1
Clenpenterol	bovine/equine retina	5	5
Clenpenterol	bovine/equine/porcine liver	0.5	0.5
Clenpenterol	urine	1	1
Clopidol	poultry liver, muscle	25	50

<b>Performance Standards of Methods Validated for use by CFIA Saskatoon Laboratory (includes some currently archived methods): February, 2005</b>			
<b>Analyte</b>	<b>Species/Matrix</b>	<b>Detection Limit (ng/g)</b>	<b>Reporting Limit (ng/g)</b>
Cypermethrin	bovine fat	10	30
Danofloxacin	avian liver, muscle	2	5
Danofloxacin	bovine/porcine kidney, liver, muscle	2	5
Decoquinatate	avian/bovine/porcine kidney, liver, muscle	100	200
Deltamethrin	bovine fat	15	40
Dexamethasone	bovine/porcine muscle	10	10
Dienestrol	bovine/equine/porcine liver	0.3	0.3
Dienestrol	urine	2	2
Diethylstilbestrol (DES)	bovine/equine/porcine liver	0.3	0.3
Diethylstilbestrol (DES)	urine	2	2
Dihydrostreptomycin	liver, kidney, muscle (various species)	20	40
Dihydrostreptomycin	bovine fat	25	50
Dipyrrone	bovine/porcine muscle	100	200
Dipyrrone metabolites	bovine/porcine muscle	100	200
Doramectin	bovine/equine/ovine/porcine liver, muscle	2	2
Enrofloxacin	avian liver, muscle	2	5
Enrofloxacin	bovine/porcine kidney, liver, muscle	2	5
Eprinomectin	bovine/equine/ovine/porcine liver, muscle	2	2
17 $\beta$ -Estradiol	bovine urine	0.1 ng/mL	1 ng/mL
Fenbendazole	bovine/porcine/ovine liver & muscle	100	200
Fenvalerate	bovine fat	10	30
Florfenicol	liver, kidney, muscle (various species)	0.3	0.5
Flunixin	bovine muscle	10	20
Furaltadone bound metabolite (AMTZ)	bovine, porcine & avian liver and muscle	0.5	0.5
Furazolidone bound metabolite (AOZ)	bovine, porcine & avian liver and muscle	0.5	0.5
Haloperidol	porcine kidney and muscle	1 (LOQ)	1
Hexestrol	bovine/equine/porcine liver	0.3	0.3
Hexestrol	urine	2	2
Hydroxymethylclenbuterol	bovine/equine retina	5	5
Hydroxymethylclenbuterol	bovine/equine/porcine liver	0.5	0.5
Isoxsuprine	bovine/equine retina	5	5
Isoxsuprine	bovine/equine/porcine liver	0.5	0.5
Isoxsuprine	urine	1	1
Ivermectin	bovine/ovine/porcine liver	2	4
Ivermectin	equine liver	2	2
Ivermectin	bovine/equine/ovine/porcine muscle	2	2
Lasalocid	bovine/porcine kidney & muscle, avian liver & muscle	0.5	1
Mabuterol	bovine/equine retina	5	5
Mabuterol	bovine/equine/porcine liver	0.5	0.5

<b>Performance Standards of Methods Validated for use by CFIA Saskatoon Laboratory (includes some currently archived methods): February, 2005</b>			
<b>Analyte</b>	<b>Species/Matrix</b>	<b>Detection Limit (ng/g)</b>	<b>Reporting Limit (ng/g)</b>
Mabuterol	urine	1	1
Mebendazole	bovine/porcine/ovine liver & muscle	50	100
Megestrol acetate	bovine/porcine fat	5	10
Melengestrol acetate	bovine/porcine fat	5	10
2-Mercaptobenzimidazole	bovine thyroid & muscle	2	2
4(6)-Methyl-2-thiouracil	bovine thyroid & muscle	2	2
Monensin	bovine/porcine kidney & muscle, avian liver & muscle	0.5	1
Morantel tartrate	bovine liver	200 (LOQ)	200
Moxidectin	bovine/equine/ovine/porcine liver, muscle	2	2
Narasin	bovine/porcine kidney & muscle, avian liver & muscle	0.5	1
Nitrofurantoin bound metabolite (AHD)	bovine, porcine & avian liver and muscle	0.5	0.5
Nitrofurazone bound metabolite (SEM)	bovine, porcine & avian liver and muscle	0.5	0.5
19-epi-Nortestosterone	urine	1	1.5
19-Nortestosterone	urine	1	1.5
Olaquinox - measured as m-QCA	porcine liver & muscle, bovine muscle	0.5	0.5
Oxtetracycline	kidney, liver, lung, muscle, whole egg	25	50
Penicillin G	kidney, liver, muscle & whole egg	2	5
Penicillin G	fat, skin	10	15
Permethrin	bovine fat	20	50
Phenylbutazone	muscle	15	15
4(6)-Phenyl-2-thiouracil	bovine thyroid & muscle	2	2
Progesterone	bovine liver, veal muscle	0.5	1
Propionylpromazine	porcine kidney and muscle	1 (LOQ)	1
4(6)-n-Propyl-2-thiouracil	bovine thyroid & muscle	2	2
Ractopamine	bovine/equine retina	5	5
Ractopamine	bovine/equine/porcine liver	0.5	0.5
Ractopamine	urine	1	1
Ritodrine	bovine/equine retina	5	5
Ritodrine	bovine/equine/porcine liver	0.5	0.5
Ritodrine	urine	1	1
Salbutamol	bovine/equine retina	5	5
Salbutamol	bovine/equine/porcine liver	0.5	0.5
Salbutamol	urine	1	1
Salinomycin	bovine/porcine kidney & muscle, avian liver & muscle	0.5	1
Sarafloxacin	avian liver, muscle	2	5
Sarafloxacin	bovine/porcine kidney, liver, muscle	2	5
Spectinomycin	bovine/porcine kidney	50	100
Streptomycin	liver, kidney, muscle (various species)	10	20
Sulfachloropyridazine	liver, kidney, muscle (various species)	10	20

<b>Performance Standards of Methods Validated for use by CFIA Saskatoon Laboratory (includes some currently archived methods): February, 2005</b>			
<b>Analyte</b>	<b>Species/Matrix</b>	<b>Detection Limit (ng/g)</b>	<b>Reporting Limit (ng/g)</b>
Sulfadiazine	liver, kidney, muscle (various species)	10	20
Sulfadimethoxine	liver, kidney, muscle (various species)	10	20
Sulfadoxine	liver, kidney, muscle (various species)	10	20
Sulfaethoxyipyridazine	liver, kidney, muscle (various species)	10	20
Sulfamethazine	liver, kidney, muscle (various species)	10	20
Sulfaquinoxaline	liver, kidney, muscle (various species)	15	20
Sulfathiazole	liver, kidney, muscle (various species)	10	20
Tapazole	bovine thyroid & muscle	2	2
Testosterone	bovine liver, veal muscle	0.5	1
epi-Testosterone	bovine liver, veal muscle	0.5	1
Tetracycline	kidney, liver, lung, muscle, whole egg	25	50
Thiabendazole	bovine/porcine/ovine liver & muscle	50	100
Thiabendazole - 5-hydroxy metabolite	bovine/porcine/ovine liver & muscle	50	100
Thiamphenicol	liver, kidney, muscle (various species)	0.5	0.5
2-Thiouracil	bovine thyroid & muscle	5	5
Tilmicosin	kidney, muscle	10	20
Tolubutanol	urine	1	1
$\alpha$ -Trenbolone	bovine liver	2	2
$\alpha$ -Trenbolone	bovine muscle	1	1
$\alpha$ -Trenbolone	urine	1	1.5
$\beta$ -Trenbolone	bovine liver	2	2
$\beta$ -Trenbolone	bovine muscle	1	1
$\beta$ -Trenbolone	urine	1	1.5
Tylosin	kidney, muscle	20	40
Virginiamycin - measured as Virginiamycin M1	porcine liver, kidney & muscle	1	2
Xylazine	porcine kidney and muscle	1 (LOQ)	1
Zearalanone	bovine/equine/porcine liver	0.3	0.3
Zeranol	bovine/equine/porcine liver	0.3	0.3
Zeranol	urine	2	2
Zeranol metabolite: Taleranol	bovine/equine/porcine liver	0.3	0.3

**COSTA RICA****LISTADO DE PRODUCTOS PROHIBIDOS Y RESTRINGIDOS DE USO VETERINARIO.**

NO	SUSTANCIA	CONDICIÓN	OBSERVACIONES
1	Clenbuterol.	Restricción	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en alimentos para todas las especies. Se autoriza su uso por otras vías de administración, según el Codex Alimentarius.

NO	SUSTANCIA	CONDICIÓN	OBSERVACIONES
2	Dimetridazol.	Restricción	Únicamente se permite el uso en animales de compañía, para el control de giardiasis.
3	Nitrofuranos.	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies.
4	Vancomicina	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies.
5	Estricnina.	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies, para uso veterinario.
6	Cloranfenicol.	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies.
7	Estilbenos.	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies.
8	Organoclorados.	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies.
9	Sulfathiazol	Prohibición	Prohibida su importación, fabricación, transporte, manejo, comercialización y uso en todas las especies.

Los productos veterinarios y alimentos para animales provenientes de Organismos Genéticamente Modificados, productos biológicos y alimentos de uso en animales originarios de países con presencia de enfermedades exóticas se requerirá del Análisis de Riesgo correspondiente.

## EUROPEAN COMMUNITY

### 5. Information on veterinary drugs without ADI/MRL

The 15<sup>th</sup> CCRVDF agreed to establish a Working Group to develop recommendations on how to deal with compounds without an ADI or MRL. The EC provides the following information as requested in order to assist the Working Group to carry out its tasks:

#### i) All compounds with no Codex MRLs used at national level for food animals

In the European Community substances intended for use in food producing animals, as pharmacologically active substances in veterinary medicinal products or as feed additives, are submitted to a scientific evaluation with regard to the safety of residues to the consumer. However there are different legislations regarding veterinary medicinal products and feed additives in the EC.

##### a) Veterinary medicinal products

The legislation concerning veterinary medicinal products requires that all pharmacologically active substances used in veterinary medicinal products intended for food producing animals are evaluated with regard to the safety of residues prior to the granting of the marketing authorisation for the product. The veterinary medicinal product can only be authorised if:

- definitive MRLs have been established (listed in Annex I of Regulation 2377/90).
  - or
- temporary MRLs have been established (listed in Annex III of Regulation 2377/90).
  - or
- a conclusion is reached that it is not necessary for the protection of the consumer to establish a maximum residue limit (listed in Annex II of Regulation 2377/90).

Substances for which no Codex MRLs exist and for which definitive MRLs have been established for use in veterinary medicinal products in the EC (Annex I of Regulation No 2377/90):

Acetylisovaleryltylosin, Albendazole oxide, Alpha-cypermethrin, Altrenogest, Amitraz, Amoxicillin, Ampicillin, Apramycin (bovine), Bacitracin (milk and rabbits), Baquiloprim, Betamethasone, Carprofen, Cefacetrile (milk), Cefalexin, Cefalonium (milk), Cefazolin (milk), Cefoperazone (milk), Cefquinome (bovine, porcine, Equidae), Cefapirin, Chlormadinone acetate, Clavulanic acid, Clorsulon, Cloxacillin, Colistin, Coumafos, Cyhalothrin, Cypermethrin, Cyromazine, Deltamethrin, Dexamethasone, Diazinon, Diclofenac, Dicloxacin, Dicyclanil, Difloxacin, Diflubenzuron, Doxycycline, Emamectin, Enrofloxacin, Erythromycin, Florfenicol, Flugestone acetate (sheep milk), Flumequine, Flumethrin (bovine, ovine), Flunixin, Halofuginone, Kanamycin, Marbofloxacin, Mebendazole, Meloxicam, Metamizole, Methylprednisolone, Morantel, Moxidectin, Nafcillin, (including framycetin), Netobimin, Nitroxynil, Novobiocin (milk), Oxacillin, Oxfendazole, Oxibendazole, Oxolinic acid, Oxyclozanide, Paromomycin, Aminoisidine), Penethamate, Permethrin, Phenoxymethyl penicillin, Piperazine (porcine, chicken eggs), Pirlimycin, Prednisolone, Rafoxanide, Rifaximin (milk), Sulfonamide group, Teflubenzuron, Thiamphenicol, Tiamulin, Tolfenamic acid, Toltrazuril, Trimethoprim, Tulathromycin, Tylosin, Valnemulin, Vedaprofen

Substances for which no Codex MRLs exist and for which temporary MRLs have been established for use in veterinary medicinal products in the EC (Annex III of Regulation No 2377/90):

Fenvalerate, Flugestone acetate (meat/muscle), Norgestomet, Oxolinic acid, Acetyl-isovaleryltylosin, Phoxim, Toltrazuril (for details see list 1 attached)

Substances for which no Codex MRLs exist and that have been evaluated for use in veterinary medicinal products in the EC and the establishment of MRLs was not considered necessary for the protection of human health (Annex II of Regulation (EEC) No 2377/90):

538 substances are listed in Annex II of the Regulation (see list 2 attached).

#### b) Feed additives

The legislation on feed additives requires that maximum residue limits are established for all feed additives unless as a result of the evaluation it is considered that the establishment of MRLs is not necessary for the protection of consumers or MRLs have already been established for the use of the substance in veterinary medicinal products. This legislation however entered into force only in October 2004 and therefore the evaluation of the authorised feed additives is currently ongoing.

Substances authorised for use as feed additives intended to have an effect on treated animals under Council Directive (EEC) No 70/524 and for which no MRLs were established: Avilamycin; Canthaxanthin; Diclazuril; Halofuginone hydrobromide; Lasalocid A sodium; Lecithin; Lignosulfonate; Maduramicin ammonium alpha; Monensin sodium; Narasin; Nicarbazine; Potassium diformate; Robenidine hydrochloride; Salinomycin sodium; Semduramicin sodium

The antibiotics, currently authorised under feed category “antibiotics”, among these substances, i.e. Salinomycin sodium, Avilamycin, Monensin sodium and Flavophospholipol will be phased out from 1 January 2006.

#### ii) Compounds in use that raise health concerns

In the European Community substances intended for use in food producing animals have to be evaluated with regard to the safety of residues. If the assessment indicates that residues of the substance concerned constitute a hazard to the health of the consumer, that substance will be prohibited or its use restricted in food producing animals.

Substances prohibited because available data suggest that their use in food producing animals is generally unsafe:

Aristolochia spp, Carbadox, Chloramphenicol, Chloroform, Chlorpromazine, Colchicines, Dapsone, Dimetridazole, Ronidazole, Malachite Green, Metronidazole, Nitrofurans (including Furazolidone) and Ronidazole, Olaquinox, Stilbenes including stilbene derivatives their salts and esters, Thyrostatic substances

Substances that are restricted to specific treatments due to consumer exposure concerns: Substances having oestrogenic (other than oestradiol 17 $\beta$  and its ester-like derivatives), androgenic or gestagenic action, Oestradiol 17 $\beta$  and its ester-like derivatives, Beta-agonists.

Substances whose use as feed additives has been restricted or prohibited due to concerns related to antimicrobial resistance:

Avoparcin, Zinc-Bacitracin, Tylosin, Spiramycin, Virginiamycin.

Zinc bacitacin, Tylosin and Spiramycin however, have been assessed for use in veterinary medicinal products and MRLs established. The therapeutic use of these substances as veterinary medicinal products is therefore authorised in the EC.

**iii) Compounds in use that create trade problems; compounds recommended for inclusion in a negative list and the reason for the inclusion in that list**

1. Substances under ii) above in particular:

Carbadox, Chloramphenicol, Dimetridazole, Malachite green, Metronidazole, Nitrofurans Phenylbutazone, Stilbenes, Thyrostatic substances.

**iv) National or regional MRLs (if any)**

See list 1 attached

**v) Other tolerances or application of an analytical limit of detection or determination**

The EC uses harmonised analytical performance limits as reference points for action (MRPLs = minimum required performance limits). MRPLs are control tools based on expert advice on feasibility of controls. They have so far been established for: Chloramphenicol, Medroxyprogesterone acetate, Nitrofurans metabolites (Furazolidone, Furaladone, Nitrofurantoin, Nitrofurazone), the sum of Malachite green and Leucomalachite green.

MRPLs are not tolerances. They are not tantamount to tolerating the use of prohibited substances in third countries in the products destined for the EC market. The EC still requires from its trading partners to prohibit the use of substances banned in the EC or to establish split systems and ask third countries to provide respective guarantees.

**Annexes**

**List 1:** MRLs established in the EC

**List 2:** Substances for which no Codex MRL evaluation exist have been evaluated as safe for use as pharmacologically active substances in veterinary medicinal products intended for use in food producing animals.

**List 1 Substances for which maximum residue limits from veterinary drugs have been fixed in the EU**

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Acetylisovaleryl-tylosin	Sum of acetylisovaleryltylosin and 3-O-acetyltylosin	Porcine	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg	Muscle Skin + fat Liver Kidney	
Abamectin	Avermectin B1a	Bovine	10 µg/kg 20 µg/kg	Fat Liver	
Abamectin	Avermectin B1a	Ovine	20 µg/kg 50 µg/kg 25 µg/kg 20 µg/kg	Muscle Fat Liver Kidney	Not for use in animals producing milk for human consumption
Acetylisovaleryl-tylosin	Sum of acetylisovaleryltylosin and 3-O-acetyltylosin	Poultry	50 µg/kg 50 µg/kg	Skin + fat Liver	Not for use in animals from which eggs are produced for human consumption Provisional MRLs expire 1.7.2006

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Albendazole	Sum of albendazole sulphoxide, albendazole sulphone and albendazole 2-aminosulphone, expressed as albendazole	all ruminants	100 µg/kg 100 µg/kg 1000 µg/kg 500 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Albendazole oxide	Sum of albendazole oxide, albendazole sulphone and albendazole 2-amino sulphone, expressed as albendazole	Bovine, ovine	100 µg/kg 100 µg/kg 1000 µg/kg 500 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Alphacypermethrin	Cypermethrin (sum of isomers)	Bovine, ovine	20 µg/kg 200 µg/kg 20 µg/kg 20 µg/kg	Muscle Fat Liver Kidney	
Alphacypermethrin	Cypermethrin (sum of isomers)		20 µg/kg	Milk	Further provisions in Commission Directive 98/82/EC4 are to be observed
Altrenogest	Altrenogest	Porcine	1 µg/kg 0.4 µg/kg	Skin + fat Liver	Only for zootechnical use and in accordance with the provisions of Directive 96/22/EC
Altrenogest	Altrenogest	Equidae	1 µg/kg 0.9 µg/kg	Fat Liver	Only for zootechnical use and in accordance with the provisions of Directive 96/22/EC
Amitraz	Sum of amitraz and all metabolites containing the 2,4-dimethylaniline moiety, expressed as amitraz	Porcine	400 µg/kg 200 µg/kg 200 µg/kg	Skin +fat Liver Kidney	
Amitraz	Sum of amitraz and all metabolites containing the 2,4-dimethylaniline moiety, expressed as amitraz	Bovine	200 µg/kg 200 µg/kg 200 µg/kg 10 µg/kg	Fat Liver Kidney Milk	
Amitraz	Sum of amitraz and all metabolites containing the 2,4-dimethylaniline moiety, expressed as amitraz	Ovine	400 µg/kg 100 µg/kg 200 µg/kg 10 µg/kg	Fat Liver Kidney Milk	



Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Amitraz	Sum of amitraz and all metabolites containing the 2,4-dimethylaniline moiety, expressed as amitraz	Caprine	200 µg/kg 100 µg/kg 200 µg/kg 10 µg/kg	Fat Liver Kidney Milk	
Amitraz	Sum of amitraz and all metabolites containing the 2,4-dimethylaniline moiety, expressed as amitraz	Bees	200 µg/kg	Honey	
Amoxicillin	Amoxicillin	All food producing species	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg 4 µg/kg	Muscle Fat Liver Kidney Milk	
Ampicillin	Ampicillin	All food producing species	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg 4 µg/kg	Muscle Fat Liver Kidney Milk	
Apramycin	Apramycin	Bovine	1000 µg/kg 1000 µg/kg 10000 µg/kg 20000 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Azaperone	Sum of azaperone and azaperol	Porcine	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg	Muscle Skin +fat Liver Kidney	
Bacitracin	Bacitracin	Bovine	100 µg/kg	Milk	
Bacitracin	Sum of bacitracin A, bacitracin B and bacitracin C	Rabbits	150 µg/kg 150 µg/kg 150 µg/kg 150 µg/kg	Muscle Fat Liver Kidney	
Baquiloprim	Baquiloprim	Bovine	10 µg/kg 300 µg/kg 150 µg/kg 30 µg/kg	Fat Liver Kidney Milk	
Baquiloprim	Baquiloprim	Porcine	40 µg/kg 50 µg/kg 50 µg/kg	Skin +fat Liver Kidney	
Benzylpenicillin	Benzylpenicillin	All food producing species	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg 4 µg/kg	Muscle Fat Liver Kidney Milk	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Betamethasone	Betamethasone	Bovine	0,75 µg/kg 2 µg/kg 0,75 µg/kg 0,3 µg/kg	Muscle Liver Kidney Milk	
Betamethasone	Betamethasone	Porcine	0,75 µg/kg 2 µg/kg 0,75 µg/kg	Muscle Liver Kidney	
Carazolol	Carazolol	Porcine	5 µg/kg 5 µg/kg 25 µg/kg 25 µg/kg	Muscle Skin +fat Liver Kidney	
Carazolol	Carazolol	Bovine	5 µg/kg 5 µg/kg 15 µg/kg 15 µg/kg 1 µg/kg	Muscle Fat Liver Kidney Milk	
Carprofen	Carprofen	Bovine	500 µg/kg 1000 µg/kg 1000 µg/kg 1000 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Carprofen	Carprofen	Equidae	500 µg/kg 1000 µg/kg 1000 µg/kg 1000 µg/kg	Muscle Fat Liver Kidney	
Cefacetile	Cefacetile	Bovine	125 µg/kg	Milk	For intramammary use only
Cefalexin	Cefalexin	Bovine	200 µg/kg 200 µg/kg 200 µg/kg 1000 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Cefalonium	Cefalonium	Bovine	20 µg/kg	Milk	
Cefapirin	Sum of cephapirin and desacetyl-cephapirin	Bovine	50 µg/kg 50 µg/kg 100 µg/kg 60 µg/kg	Muscle Fat Kidney Milk	
Cefazolin	Cefazolin	Bovine, ovine, caprine	50 µg/kg	Milk	
Cefoperazone	Cefoperazone	Bovine	50 µg/kg	Milk	
Cefquinome	Cefquinome	Bovine	50 µg/kg 50 µg/kg 100 µg/kg 200 µg/kg 20 µg/kg	Muscle Fat Liver Kidney Milk	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Cefquinome	Cefquinome	Porcine	50 µg/kg 50 µg/kg 100 µg/kg 200 µg/kg	Muscle Skin + fat Liver Kidney	
Cefquinome	Cefquinome	Equidae	50 µg/kg 50 µg/kg 100 µg/kg 200 µg/kg	Muscle Fat Liver Kidney	
Ceftiofur	Sum of all residues retaining the betalactam structure expressed as desfuroyl-ceftiofur	Bovine	1000 µg/kg 2000 µg/kg 2000 µg/kg 6000 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Ceftiofur	Sum of all residues retaining the betalactam structure expressed as desfuroyl-ceftiofur	Porcine	1000 µg/kg 2000 µg/kg 2000 µg/kg 6000 µg/kg	Muscle Fat Liver Kidney	
Chlormadinone	Chlormadinone	Bovine	4 µg/kg 2 µg/kg 2,5 µg/kg	Fat Liver Milk	For zootechnical use only
Chlortetracycline	Sum of parent drug and its 4-epimer	All food producing species	100 µg/kg 300 µg/kg 600 µg/kg 100 µg/kg 200 µg/kg	Muscle Liver Kidney Milk Eggs	
Clavulanic acid	Clavulanic acid	Bovine	100 µg/kg 100 µg/kg 200 µg/kg 400 µg/kg 200 µg/kg	Muscle Fat Liver Kidney Milk	
Clavulanic acid	Clavulanic acid	Porcine	100 µg/kg 100 µg/kg 200 µg/kg 400 µg/kg	Muscle Skin + fat Liver Kidney	
Clenbuterol hydrochloride	Clenbuterol	Bovine	0,1 µg/kg 0,5 µg/kg 0,5 µg/kg 0,05 µg/kg	Muscle Liver Kidney Milk	
Clenbuterol hydrochloride	Clenbuterol	Equidae	0,1 µg/kg 0,5 µg/kg 0,5 µg/kg	Muscle Liver Kidney	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Clorsulon	Clorsulon	Bovine	35 µg/kg 100 µg/kg 200 µg/kg	Muscle Liver Kidney	
Closantel	Closantel	Bovine	1000 µg/kg 3000 µg/kg 1000 µg/kg 3000 µg/kg	Muscle Fat Liver Kidney	
Closantel	Closantel	Ovine	1500 µg/kg 2000 µg/kg 1500 µg/kg 5000 µg/kg	Muscle Fat Liver Kidney	
Cloxacillin	Cloxacillin	All food producing species	300 µg/kg 300 µg/kg 300 µg/kg 300 µg/kg 30 µg/kg	Muscle Fat Liver Kidney Milk	
Colistin	Colistin	All food producing species	150 µg/kg 150 µg/kg 150 µg/kg 200 µg/kg 50 µg/kg 300 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk Eggs	
Coumafos	Coumafos	Bees	100 µg/kg	Honey	
Cyfluthrin	Cyfluthrin (sum of isomers)	Bovine	10 µg/kg 50 µg/kg 10 µg/kg 10 µg/kg	Muscle Fat Liver Kidney	
Cyfluthrin	Cyfluthrin (sum of isomers)		20 µg/kg	Milk	Further provisions in Council Directive 94/29/EC are to be observed
Cyhalothrin	Cyhalothrin (sum of isomers)	Bovine	500 µg/kg 50 µg/kg	Fat Kidney	
Cyhalothrin	Cyhalothrin (sum of isomers)		50 µg/kg	Milk	Further provisions in Council Directive 94/29/EC are to be observed
Cypermethrin	Cypermethrin (sum of isomers)	All ruminants	20 µg/kg 200 µg/kg 20 µg/kg 20 µg/kg 20 µg/kg	Muscle Fat Liver Kidney Milk	Further provisions in Commission Directive 98/82/EC are to be observed
Cypermethrin	Cypermethrin (sum of isomers)	Salmonidae	50 µg/kg	Muscle and skin in natural proportions	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Cyromazine	Cyromazine	Ovine	300 µg/kg 300 µg/kg 300 µg/kg 300 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Danofloxacin	Danofloxacin	All food producing species except bovine, ovine, caprine and poultry	100 µg/kg 50 µg/kg 200 µg/kg 200 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney	
Danofloxacin	Danofloxacin	Bovine, ovine, caprine	200 µg/kg 100 µg/kg 400 µg/kg 400 µg/kg 30 µg/kg	Muscle Fat Liver Kidney Milk	
Danofloxacin	Danofloxacin	Poultry	200 µg/kg 100 µg/kg 400 µg/kg 400 µg/kg	Muscle Skin +fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Deltamethrin	Deltamethrin	All ruminants	10 µg/kg 50 µg/kg 10 µg/kg 10 µg/kg 20 µg/kg	Muscle Fat Liver Kidney Milk	
Deltamethrin	Deltamethrin	Fin fish	10 µg/kg	Muscle and skin in natural proportions	
Dexamethasone	Dexamethasone	Bovine, porcine, caprine, equidae	0,75 µg/kg 2 µg/kg 0,75 µg/kg	Muscle Liver Kidney	
Dexamethasone	Dexamethasone	Bovine, caprine	0,3 µg/kg	Milk	
Diazinon	Diazinon	Bovine, ovine, caprine, porcine	20 µg/kg 700 µg/kg 20 µg/kg 20 µg/kg	Muscle Fat Liver Kidney	
Diazinon	Diazinon	Bovine, ovine, caprine	20 µg/kg	Milk	
Diclofenac	Diclofenac	Bovine	5 µg/kg 1 µg/kg 5 µg/kg 10 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption.
Diclofenac	Diclofenac	Porcine	5 µg/kg 1 µg/kg 5 µg/kg 10 µg/kg	Muscle Fat Liver Kidney	

<sup>1</sup> For fin fish this MRL relates to “muscle and skin in natural proportions”

<sup>2</sup> For porcine and poultry species this MRL relates to “skin and fat in natural proportions”

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Dicloxacillin	Dicloxacillin	All food producing species	300 µg/kg 300 µg/kg 300 µg/kg 300 µg/kg 30 µg/kg	Muscle Fat Liver Kidney Milk	
Dicyclanil	Sum of dicyclanil and 2,4,6-triamino-pyrimidine-5-carbonitrile	Ovine	200 µg/kg 150 µg/kg 400 µg/kg 400 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Difloxacin	Difloxacin	All food producing species except bovine, ovine, caprine, porcine and poultry	300 µg/kg 100 µg/kg 800 µg/kg 600 µg/kg	Muscle <sup>1</sup> Fat Liver Kidney	
Difloxacin	Difloxacin	Bovine, ovine, caprine	400 µg/kg 100 µg/kg 1400 µg/kg 800 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Difloxacin	Difloxacin	Porcine	400 µg/kg 100 µg/kg 800 µg/kg 800 µg/kg	Muscle Skin + fat Liver Kidney	
Difloxacin	Difloxacin	Poultry	300 µg/kg 400 µg/kg 1900 µg/kg 600 µg/kg	Muscle Skin +fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Diflubenzuron	Diflubenzuron	Salmonidae	1000 µg/kg	Muscle and skin in natural proportions	
Dihydro-streptomycin	Dihydro-streptomycin	Bovine, ovine, porcine	500 µg/kg 500 µg/kg 500 µg/kg 1000 µg/kg	Muscle Fat Liver Kidney	
Dihydro-streptomycin	Dihydro-streptomycin	Bovine, ovine	200 µg/kg	Milk	
Doramectin	Doramectin	Bovine	10 µg/kg 150 µg/kg 100 µg/kg 30 µg/kg	Muscle Fat Liver Kidney	Not for use in bovines producing milk for human consumption
Doramectin	Doramectin	Porcine, ovine	20 µg/kg 100 µg/kg 50 µg/kg 30 µg/kg	Muscle Fat Liver Kidney	Not for use in ovines producing milk for human consumption
Doramectin	Doramectin	Deer, including reindeer	20 µg/kg 100 µg/kg 50 µg/kg 30 µg/kg	Muscle Fat Liver Kidney	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Doxycycline	Doxycycline	Bovine	100 µg/kg 300 µg/kg 600 µg/kg	Muscle Liver Kidney	Not for use in animals from which milk is produced for human consumption
Doxycycline	Doxycycline	Porcine	100 µg/kg 300 µg/kg 300 µg/kg 600 µg/kg	Muscle Skin +fat Liver Kidney	
Doxycycline	Doxycycline	Poultry	100 µg/kg 300 µg/kg 300 µg/kg 600 µg/kg	Muscle Skin +fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Emamectin	Emamectin B1a	Fin fish	100 µg/kg	Muscle and skin in natural proportions	
Enrofloxacin	Sum of enrofloxacin and ciprofloxacin	All food producing species except bovine, ovine, caprine, porcine, rabbits and poultry	100 µg/kg 100 µg/kg 300 µg/kg 200 µg/kg	Muscle <sup>1</sup> Fat Liver Kidney	
Enrofloxacin	Sum of enrofloxacin and ciprofloxacin	Bovine, ovine, caprine	100 µg/kg 100 µg/kg 300 µg/kg 200 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Enrofloxacin	Sum of enrofloxacin and ciprofloxacin	Porcine, rabbits	100 µg/kg 100 µg/kg 200 µg/kg 300 µg/kg	Muscle Fat <sup>2</sup> Liver Kidney	
Enrofloxacin	Sum of enrofloxacin and ciprofloxacin	Poultry	100 µg/kg 100 µg/kg 200 µg/kg 300 µg/kg	Muscle Skin + fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Eprinomectin	Eprinomectin B1a	Bovine	50 µg/kg 250 µg/kg 1500 µg/kg 300 µg/kg 20 µg/kg	Muscle Fat Liver Kidney Milk	
Erythromycin	Erythromycin A	All food producing species	200 µg/kg 200 µg/kg 200 µg/kg 200 µg/kg 40 µg/kg 150 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk Eggs	

<sup>1</sup> For fin fish this MRL relates to “muscle and skin in natural proportions”

<sup>2</sup> For porcine and poultry species this MRL relates to “skin and fat in natural proportions”

<sup>1</sup> For fin fish this MRL relates to “muscle and skin in natural proportions”

<sup>2</sup> For porcine and poultry species this MRL relates to “skin and fat in natural proportions”

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Febantel	Sum of extractable residues which may be oxidized to oxfendazole sulphone	All ruminants, equidae	50 µg/kg 50 µg/kg 500 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Febantel	Sum of extractable residues which may be oxidized to oxfendazole sulphone	All ruminants,	10 µg/kg	Milk	
Fenbendazole	Sum of extractable residues which may be oxidized to oxfendazole sulphone	All ruminants, equidae	50 µg/kg 50 µg/kg 500 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Fenbendazole	Sum of extractable residues which may be oxidized to oxfendazole sulphone	All ruminants	10 µg/kg	Milk	
Fenbendazole	Sum of flubendazole and (2-amino 1H-benzimidazole-5-yl)(4 fluorophenyl) methanone	Turkey	50 µg/kg 50 µg/kg 400 µg/kg 300 µg/kg	Muscle Skin +fat Liver Kidney	
Fenbendazole	Sum of flubendazole and (2-amino 1H-benzimidazole-5-yl)(4 fluorophenyl) methanone	Porcine, chicken, game birds	50 µg/kg 400 µg/kg 300 µg/kg	Skin +fat Liver Kidney	
Fenbendazole	Flubendazole	Chicken	400 µg/kg	Eggs	
Fenvalerate	Fenvalerate (sum of RR, SS, RS and SR isomers)	Bovine	25 µg/kg 250 µg/kg 25 µg/kg 25 µg/kg 40 µg/kg	Muscle Fat Liver Kidney Milk	Provisional MRLs expire on 1.7.2006
Florfenicol	Sum of florfenicol and its metabolites measured as florfenicol-amine	All food producing species except bovine, ovine, caprine, porcine, poultry and fin fish	100 µg/kg 200 µg/kg 2000 µg/kg 300 µg/kg	Muscle Fat Liver Kidney	



Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Florfenicol	Sum of florfenicol and its metabolites measured as florfenicol-amine	Bovine, ovine, caprine	200 µg/kg 3000 µg/kg 300 µg/kg	Muscle Fat Kidney	Not for use in animals from which milk is produced for human consumption
Florfenicol	Sum of florfenicol and its metabolites measured as florfenicol-amine	Porcine	300 µg/kg 500 µg/kg 2000 µg/kg 500 µg/kg	Muscle Skin + fat Liver Kidney	
Florfenicol	Sum of florfenicol and its metabolites measured as florfenicol-amine	Poultry	100 µg/kg 200 µg/kg 2500 µg/kg 750 µg/kg	Muscle Skin + fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Florfenicol	Sum of florfenicol and its metabolites measured as florfenicol-amine	Fin fish	1000 µg/kg	Muscle and skin in natural proportions	
Flubendazole	Sum of flubendazole and (2-amino 1H-benzimidazol-5-	Turkey	50 µg/kg 50 µg/kg 400 µg/kg 300 µg/kg	Muscle Skin +fat Liver Kidney	
Flugestone acetate	Flugestone acetate	Ovine, caprine	1 µg/kg	Milk	For intravaginal use for zootechnical purposes only
Flugestone acetate	Flugestone acetate	Ovine, caprine	0.5 µg/kg 0.5 µg/kg 0.5 µg/kg 0.5 µg/kg	Muscle Fat Liver Kidney	Provisional MRLs expiry on 1.1.2008 For therapeutic or zootechnical use only
Flumequine	Flumequine	All food producing species except bovine, ovine, caprine, porcine, poultry and fin fish	200 µg/kg 250 µg/kg 500 µg/kg 1000 µg/kg	Muscle Fat Liver Kidney	
Flumequine	Flumequine	Bovine, ovine, caprine	200 µg/kg 300 µg/kg 500 µg/kg 1500 µg/kg 50 µg/kg	Muscle Fat Liver Kidney Milk	
Flumequine	Flumequine	Porcine	200 µg/kg 300 µg/kg 500 µg/kg 1500 µg/kg	Muscle Skin + fat Liver Kidney	
Flumequine	Flumequine	Poultry	400 µg/kg 250 µg/kg 800 µg/kg 1000 µg/kg	Muscle Skin + fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Flumequine	Flumequine	Fin fish	600 µg/kg	Muscle and skin in natural proportions	
Flumethrin	Flumethrin (sum of trans-Z isomers)	Bovine	10 µg/kg 150 µg/kg 20 µg/kg 10 µg/kg 30 µg/kg	Muscle Fat Liver Kidney Milk	
Flumethrin	Flumethrin (sum of trans-Z isomers)	Ovine	10 µg/kg 150 µg/kg 20 µg/kg 10 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Flunixin	Flunixin	Bovine	20 µg/kg 30 µg/kg 300 µg/kg 100 µg/kg	Muscle Fat Liver Kidney	
Flunixin	5-Hydroxyflunixin	Bovine	40 µg/kg	Milk	
Flunixin	Flunixin	Porcine	50 µg/kg 10 µg/kg 200 µg/kg 30 µg/kg	Muscle Skin + fat Liver Kidney	
Flunixin	Flunixin	Equidae	10 µg/kg 20 µg/kg 100 µg/kg 200 µg/kg	Muscle Fat Liver Kidney	
Gentamicin	Sum of gentamicin C1, gentamicin C1a, gentamicin C2 and gentamicin C2a	Bovine, porcine	50 µg/kg 50 µg/kg 200 µg/kg 750 µg/kg	Muscle Fat Liver Kidney	
Gentamicin	Sum of gentamicin C1, gentamicin C1a, gentamicin C2 and gentamicin C2a	Bovine	100 µg/kg	Milk	
Halofuginone	Halofuginone	Bovine	10 µg/kg 25 µg/kg 30 µg/kg 30 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Imidocarb	Imidocarb	Bovine	300 µg/kg 50 µg/kg 2000 µg/kg 1500 µg/kg 50 µg/kg	Muscle Fat Liver Kidney Milk	
Imidocarb	Imidocarb	Ovine	300 µg/kg 50 µg/kg 2000 µg/kg 1500 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Ivermectin	22,23-Dihydro-avermectin B1a	Deer, including reindeer	20 µg/kg 100 µg/kg 50 µg/kg 20 µg/kg	Muscle Fat Liver Kidney	
Ivermectin	22,23-Dihydro-avermectin B1a	Bovine	40 µg/kg 100 µg/kg	Fat Liver	
Ivermectin	22,23-Dihydro-avermectin B1a	Porcine, ovine, equidae	20 µg/kg 15 µg/kg	Fat Liver	
Kanamycin	Kanamycin A	All food producing species except fish	100 µg/kg 100 µg/kg 600 µg/kg 2500 µg/kg 150 µg/kg	Muscle Fat Liver Kidney Milk	Not for use in animals from which eggs are produced for human consumption. For porcine and poultry species this MRL relates to “skin and fat in natural proportions”
Levamisole	Levamisole	Bovine, ovine, porcine, poultry	10 µg/kg 10 µg/kg 100 µg/kg 10 µg/kg	Muscle Fat Liver Kidney	
Lincomycin	Lincomycin	All food producing species	100 µg/kg 50 µg/kg 500 µg/kg 1500 µg/kg 150 µg/kg 50 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk Eggs	
Marbofloxacin	Marbofloxacin	Bovine	150 µg/kg 50 µg/kg 150 µg/kg 150 µg/kg 75 µg/kg	Muscle Fat Liver Kidney Milk	
Marbofloxacin	Marbofloxacin	Porcine	150 µg/kg 50 µg/kg 150 µg/kg 150 µg/kg	Muscle Skin + fat Liver Kidney	
Mebendazole	Sum of mebendazole methyl (5-(1-hydroxy, 1-phenyl) methyl-1H-benzimidazol-2-yl) carbamate and (2-amino-1H-benzimidazol-5-yl) phenylmethanone, expressed as mebendazole equivalents	Ovine, caprine, equidae	60 µg/kg 60 µg/kg 400 µg/kg 60 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Meloxicam	Meloxicam	Bovine	20 µg/kg 65 µg/kg 65 µg/kg 15 µg/kg	Muscle Liver Kidney Milk	

<sup>1</sup> For fin fish this MRL relates to “muscle and skin in natural proportions”

<sup>2</sup> For porcine and poultry species this MRL relates to “skin and fat in natural proportions”

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Meloxicam	Meloxicam	Porcine	20 µg/kg 65 µg/kg 65 µg/kg	Muscle Liver Kidney	
Meloxicam	Meloxicam	Equidae	20 µg/kg 65 µg/kg 65 µg/kg	Muscle Liver Kidney	
Metamizole	4-Methylamino-antipyrin	Bovine	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg 50 µg/kg	Muscle Fat Liver Kidney Milk	
Metamizole	4-Methylamino-antipyrin	Porcine	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg	Muscle Skin + fat Liver Kidney	
Metamizole	4-Methylamino-antipyrin	Equidae	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg	Muscle Fat Liver Kidney	
Methylprednisolone	Methyl-prednisolone	Bovine	10 µg/kg 10 µg/kg 10 µg/kg 10 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Morantel	Sum of residues which may be hydrolysed to N-methyl-1,3-propanediamine and expressed as morantel equivalents	Bovine, ovine	100 µg/kg 100 µg/kg 800 µg/kg 200 µg/kg 50 µg/kg	Muscle Fat Liver Kidney Milk	
Moxidectin	Moxidectin	Bovine, ovine	50 µg/kg 500 µg/kg 100 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Moxidectin	Moxidectin	Bovine	40 µg/kg	Milk	
Moxidectin	Moxidectin	Ovine	40 µg/kg	Milk	
Moxidectin	Moxidectin	Equidae	50 µg/kg 500 µg/kg 100 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Nafcillin	Nafcillin	All ruminants	300 µg/kg 300 µg/kg 300 µg/kg 300 µg/kg 30 µg/kg	Muscle Fat Liver Kidney Milk	For intramammary use only
Neomycin (including framycetin)	Neomycin B	All food producing species	500 µg/kg 500 µg/kg 500 µg/kg 5000 µg/kg 1500 µg/kg 500 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk Eggs	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Netobimin	Sum of albendazole oxide, albendazole sulphone and albendazole 2-aminosulphone, expressed as Albendazole	Bovine, ovine	100 µg/kg 100 µg/kg 1000 µg/kg 500 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	For oral use only
Nitroxinil	Nitroxinil	Bovine, ovine	400 µg/kg 200 µg/kg 20 µg/kg 400 µg/kg	Muscle Fat Liver Kidney	
Norgestomet	Norgestomet	Bovine	0.5 µg/kg 0.5 µg/kg 0.5 µg/kg 0.5 µg/kg 0.15 µg/kg	Muscle Fat Liver Kidney Milk	Provisional MRLs expiry on 1.1.2008 For therapeutic or zootechnical use only
Novobiocin	Novobiocin	Bovine	50 µg/kg	Milk	
Oxacillin	Oxacillin	All food producing species	300 µg/kg 300 µg/kg 300 µg/kg 300 µg/kg 30 µg/kg	Muscle Fat Liver Kidney Milk	
Oxfendazole	Sum of extractable residues which may be oxidized to oxfendazole sulphone	All ruminants, equidae	50 µg/kg 50 µg/kg 500 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Oxfendazole	Sum of extractable residues which may be oxidized to oxfendazole sulphone	All ruminants	10 µg/kg	Milk	
Oxibendazole	Oxibendazole	Porcine	100 µg/kg 500 µg/kg 200 µg/kg 100 µg/kg	Muscle Skin +fat Liver Kidney	
Oxolinic acid	Oxolinic acid	Porcine	100 µg/kg 50 µg/kg 150 µg/kg 150 µg/kg	Muscle Fat Liver Kidney	
Oxolinic acid	Oxolinic acid	Chicken	100 µg/kg 50 µg/kg 150 µg/kg 150 µg/kg	Muscle Skin + fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Oxolinic acid	Oxolinic acid	Fin fish	100 µg/kg	Muscle and skin in natural proportions	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Oxolinic acid	Oxolinic acid	Bovine	100 µg/kg 50 µg/kg 150 µg/kg 150 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption Provisional MRLs expire 1.1.2006
Oxyclozanide	Oxyclozanide	All ruminants	20 µg/kg 20 µg/kg 500 µg/kg 100 µg/kg 10 µg/kg	Muscle Fat Liver Kidney Milk	
Oxytetracycline	Sum of parent drug and its 4-epimer	All food producing species	100 µg/kg 300 µg/kg 600 µg/kg 100 µg/kg 200 µg/kg	Muscle Liver Kidney Milk Eggs	
Paromomycin	Paromomycin	All food producing species	500 µg/kg 1500 µg/kg 1500 µg/kg	Muscle <sup>1</sup> Liver Kidney	Not for use in animals from which milk or eggs are produced for human consumption
Penethamate	Benzylpenicillin	Bovine	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg 4 µg/kg	Muscle Fat Liver Kidney Milk	
Penethamate	Benzylpenicillin	Porcine	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Permethrin	Permethrin (sum of isomers)	Bovine	50 µg/kg 500 µg/kg 50 µg/kg 50 µg/kg	Muscle Fat Liver Kidney	
Permethrin	Permethrin (sum of isomers)		50 µg/kg	Milk	Further provisions in Commission Directive 98/82/EC are to be observed (OJ L 290, 29.10.1998, p.25)
Phenoxymethylpenicillin	Phenoxymethylpenicillin	Porcine	25 µg/kg 25 µg/kg 25 µg/kg	Muscle Liver Kidney	
Phoxim	Phoxim	Porcine	20 µg/kg 700 µg/kg 20 µg/kg 20 µg/kg	Muscle Skin + fat Liver Kidney	
Phoxim	Phoxim	Ovine	50 µg/kg 400 µg/kg 50 µg/kg	Muscle Fat Kidney	Not for use in animals from which milk is produced for human consumption
Phoxim	Phoxim	Chicken	50 µg/kg 550 µg/kg 25 µg/kg 50 µg/kg 60 µg/kg	Muscle Skin + fat Liver Kidney Eggs	Provisional MRLs expire on 1.7.2005
Piperazine	Piperazine	Porcine	400 µg/kg 800 µg/kg 2000 µg/kg 1000 µg/kg	Muscle Skin + fat Liver Kidney	

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Piperazine	Piperazine	Chicken	2000 µg/kg	Eggs	
Pirlimycin	Pirlimycin	Bovine	100 µg/kg 100 µg/kg 1000 µg/kg 400 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Prednisolone	Prednisolone	Bovine	4 µg/kg 4 µg/kg 10 µg/kg 10 µg/kg 6 µg/kg	Muscle Fat Liver Kidney Milk	
Rafoxanide	Rafoxanide	Bovine	30 µg/kg 30 µg/kg 10 µg/kg 40 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption
Rafoxanide	Rafoxanide	Ovine	100 µg/kg 250 µg/kg 150 µg/kg 150 µg/kg	Muscle Fat Liver Kidney	
Rifaximin	Rifaximin	Bovine	60 µg/kg	Milk	
Sarafloxacin	Sarafloxacin	Chicken	10 µg/kg 100 µg/kg	Skin +fat Liver	
Sarafloxacin	Sarafloxacin	Salmonidae	30µg/kg	Muscle and skin in natural proportions	
Spectinomycin	Spectinomycin	All food producing species except ovine	300 µg/kg 500 µg/kg 1000 µg/kg 5000 µg/kg 200 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk	Not for use in animals from which eggs are produced for human consumption
Spectinomycin	Spectinomycin	Ovine	300 µg/kg 500 µg/kg 2000 µg/kg 5000 µg/kg 200 µg/kg	Muscle Fat Liver Kidney Milk	
Spiramycin	Sum of spiramycin and neospiramycin	Bovine	200 µg/kg 300 µg/kg 300 µg/kg 300 µg/kg 200 µg/kg	Muscle Fat Liver Kidney Milk	
Spiramycin	Sum of spiramycin and neospiramycin	Chicken	200 µg/kg 300 µg/kg 400 µg/kg	Muscle Skin +fat Liver	

<sup>1</sup> For fin fish this MRL relates to “muscle and skin in natural proportions”

<sup>2</sup> For porcine and poultry species this MRL relates to “skin and fat in natural proportions”

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Spiramycin	Spiramycin 1	Porcine	250 µg/kg 2000 µg/kg 1000 µg/kg	Muscle Liver Kidney	
Streptomycin	Streptomycin	Bovine, ovine	500 µg/kg 500 µg/kg 500 µg/kg 1000 µg/kg 200 µg/kg	Muscle Fat Liver Kidney Milk	
Streptomycin	Streptomycin	Porcine	500 µg/kg 500 µg/kg 500 µg/kg 1000 µg/kg	Muscle Skin + fat Liver Kidney	
Sulfonamide group all substances	Parent drug	All food producing species	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg	Muscle Fat Liver Kidney	The combined total residues of all substances within the sulfonamide group should not exceed 100 µg/kg
Sulfonamide group all substances	Parent drug	Bovine, ovine, caprine	100 µg/kg	Milk	
Teflubenzuron	Teflubenzuron	Salmonidae	500 µg/kg	Muscle and skin in natural proportions	
Tetracycline	Sum of parent drug and its 4-epimer	All food producing species	100 µg/kg 300 µg/kg 600 µg/kg 100 µg/kg 200 µg/kg	Muscle Liver Kidney Milk Eggs	
Thiabendazole	Sum of thiabendazole and 5-hydroxy-thiabendazole	Bovine, Caprine	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg	Muscle Fat Liver Kidney Milk	
Thiamphenicol	Thiamphenicol	Bovine	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg	Muscle Fat Liver Kidney Milk	
Thiamphenicol	Thiamphenicol	Chicken	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg	Muscle Skin +fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Tiamulin	Sum of metabolites that may be hydrolysed to 8-α-hydroxymutilin Tiamulin	Porcine	100 µg/kg 500 µg/kg	Muscle Liver	



Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Tiamulin	Sum of metabolites that may be hydrolysed to 8- $\alpha$ -hydroxymutilin Tiamulin	Chicken	100 $\mu$ g/kg 100 $\mu$ g/kg 1000 $\mu$ g/kg	Muscle Skin + fat Liver	
Tiamulin	Tiamulin	Chicken	1000 $\mu$ g/kg	Eggs	
Tiamulin	Sum of metabolites that may be hydrolysed to 8- $\alpha$ -hydroxymutilin	Turkey	100 $\mu$ g/kg 100 $\mu$ g/kg 300 $\mu$ g/kg	Muscle Skin + fat Liver	
Tiamulin	Sum of metabolites that may be hydrolysed to 8- $\alpha$ -hydroxymutilin	Rabbits	100 $\mu$ g/kg 500 $\mu$ g/kg	Muscle Liver	
Tilmicosin	Tilmicosin	All food producing species except poultry	50 $\mu$ g/kg 50 $\mu$ g/kg 1000 $\mu$ g/kg 1000 $\mu$ g/kg 50 $\mu$ g/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk	
Tilmicosin	Tilmicosin	Poultry	75 $\mu$ g/kg 75 $\mu$ g/kg 1000 $\mu$ g/kg 250 $\mu$ g/kg	Muscle Skin + fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Tolfenamic acid	Tolfenamic acid	Bovine	50 $\mu$ g/kg 400 $\mu$ g/kg 100 $\mu$ g/kg 50 $\mu$ g/kg	Muscle Liver Kidney Milk	
Tolfenamic acid	Tolfenamic acid	Porcine	50 $\mu$ g/kg 400 $\mu$ g/kg 100 $\mu$ g/kg	Muscle Liver Kidney	
Toltrazuril	Toltrazuril sulfone	Chicken	100 $\mu$ g/kg 200 $\mu$ g/kg 600 $\mu$ g/kg 400 $\mu$ g/kg	Muscle Skin + fat Liver Kidney	Not for use in animals from which eggs are produced for human consumption
Toltrazuril	Toltrazuril sulfone	Turkey	100 $\mu$ g/kg 200 $\mu$ g/kg 600 $\mu$ g/kg 400 $\mu$ g/kg	Muscle Skin + fat Liver Kidney	
Toltrazuril	Toltrazuril sulfone	Porcine	100 $\mu$ g/kg 150 $\mu$ g/kg 500 $\mu$ g/kg 250 $\mu$ g/kg	Muscle Skin + fat Liver Kidney	
Toltrazuril	Toltrazuril sulfone	Bovine	100 $\mu$ g/kg 150 $\mu$ g/kg 500 $\mu$ g/kg 250 $\mu$ g/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption. Provisional MRLs expire on 1.7.2006

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Triclabendazole	Sum of extractable residues which may be oxidized to ketotriclabendazole	Bovine, ovine	100 µg/kg 100 µg/kg 100 µg/kg	Muscle Liver Kidney	Not for use in animals producing milk for human consumption
Trimethoprim	Trimethoprim	All food producing species except <i>Equidae</i>	50 µg/kg 50 µg/kg 50 µg/kg 50 µg/kg	Muscle <sup>5</sup> Fat <sup>6</sup> Liver Kidney Milk	Not for use in animals from which eggs are produced for human consumption
Trimethoprim	Trimethoprim	Equidae	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg	Muscle Fat Liver Kidney	
Tulathromycin	(2R,3S,4R,5R,8R,10R,11R,12S,13S,14R)-2-ethyl-3,4,10,13-tetrahydroxy-3,5,8,10,12,14-hexamethyl-11-[[[3,4,6-trideoxy-3-(dimethylamino)-beta-D-xylo-hexopyranosyl]oxy]-1-oxa-6-azacyclopentadecan-15-one expressed as tulathromycin equivalents	Bovine	100 µg/kg 3000 µg/kg 3000 µg/kg	Fat Liver Kidney	Not for use in animals producing milk for human consumption.
Tulathromycin	(2R,3S,4R,5R,8R,10R,11R,12S,13S,14R)-2-ethyl-3,4,10,13-tetrahydroxy-3,5,8,10,12,14-hexamethyl-11-[[[3,4,6-trideoxy-3-(dimethylamino)-beta-D-xylo-hexopyranosyl]oxy]-1-oxa-6-azacyclopentadecan-15-one expressed as tulathromycin equivalents	Porcine	100 µg/kg 3000 µg/kg 3000 µg/kg	Skin+fat Liver Kidney	
Tylosin	Tylosin A	All food producing species	100 µg/kg 100 µg/kg 100 µg/kg 100 µg/kg 50 µg/kg 200 µg/kg	Muscle <sup>1</sup> Fat <sup>2</sup> Liver Kidney Milk Eggs	

<sup>5</sup> For fin fish this MRL relates to “muscle and skin in natural proportions”

<sup>6</sup> For porcine and poultry species this MRL relates to “skin and fat in natural proportions”

Substance(s)	Marker residue	Animal species	MRLs	Target tissues	Other provisions
Valnemulin	Valnemulin	Porcine	50 µg/kg 500 µg/kg 100 µg/kg	Muscle Liver Kidney	
Vedaprofen	Vedaprofen	Equidae	50 µg/kg 20 µg/kg 100 µg/kg 1000 µg/kg	Muscle Fat Liver Kidney	

## List 2

Absinthium extract, Acetyl cysteine, Acetylmethionine, Acetylsalicylic acid, Acetylsalicylic acid DL-lysine, Adenosine, Adonis vernalis, Aesculus hippocastanum, Agnus castus, Ailanthus altissima, Alanine, Alfacalcidol, Alfaprostol, Allantoin, Allium cepa, Aloe vera gel and whole leaf extract of aloe vera, Aloes, Barbados and Capae, Aluminium distearate, Aluminium hydroxide, Aluminium hydroxide acetate, Aluminium monostearate, Aluminium phosphate, Aluminium salicylate, basic, Aluminium tristearate, Aminoethanol [2-Aminoethanol] (Ethanolamine), Amino-ethanol glucuronate (2-Aminoethanol glucuronate), Aminoethyl dihydrogen-phosphate [2-Aminoethyl dihydrogenphosphate], Ammonium chloride, Ammonium lauryl sulphate, Ammonium sulfate, Amprolium, Angelicae radix aetheroleum, Anisi aetheroleum, Anisi stellati fructus, standardised extracts and preparations thereof, Apocynum cannabinum, Apramycin (ovine, porcine, chicken, rabbits), Aqua levici, Arginine, Arnicae montana, Arnicae radix, Artemisia abrotanum, Asparagine, Aspartic acid, Atropa belladonna, Atropine, Azagly-nafarelin, Azamethiphos, Bacitracin (meat), Balsamum peruvianum, Barium selenate, Beclomethasone dipropionate, Bellis perennis, Benzalkonium chloride, Benzocaine, Benzyl alcohol, Benzyl benzoate, Benzyl-p-hydroxybenzoate, Betaine, Betaine glucuronat, Biotin, Bismuth subcarbonate, Bismuth subgallate, Bismuth subnitrate, Bismuth subsalicylate, Bituminosulfonates, ammonium and sodium salts, Boldo folium, Boric acid and borates, Bromhexine, Bromide, sodium salt, Bronopol, Brotizolam, Buserelin, Butafosfan, Butane [n-Butane], Butanol [n-Butanol], Butorphanol tartrate, Butyl 4-hydroxybenzoate, Butylscopolaminium bromide, Caffeine, Calcium acetate, Calcium aspartate, Calcium benzoate, Calcium borogluconate, Calcium carbonate, Calcium chloride, Calcium citrate, Calcium glucoheptonate, Calcium gluco lactate, Calcium gluconate, Calcium gluconoglucoheptonate, Calcium glutamate, Calcium glycerophosphate, Calcium hydroxide, Calcium hypophosphite, Calcium maleate, Calcium oxide, Calcium pantothenate, Calcium phosphate, Calcium polyphosphates, Calcium propionate, calcium silicate, Calcium stearate, Calcium sulphate, Calendula officinalis, Calendulae flos, Camphor, Camphora, Capsici fructus, Carbasalate calcium, Carbetocin, Cardamom extract, Cardiospermum halicacabum, Carlinae radix, Carnitine, Carvi aetheroleum, Caryophylli aetheroleum, Cefacetrile (meat), Cefalonium (meat), Cefazolin (meat), Cefoperazone (meat), Centellae asiaticae extractum, Cetostearyl alcohol, Cetrimide, Chlorhexidine, Chlorocresol, Chlorphenamine, Choline, Chrysanthemum cinerarifolii flos, Chymotrypsin, Cimicifugae racemosae rhizoma, Cinchonae cortex, standardised extracts and preparations thereof, Cinnamomi cassiae aetheroleum, Cinnamomi cassiae cortex, standardised extracts and preparations thereof, Cinnamomi ceylanici aetheroleum, Cinnamomi ceylanici cortex, standardised extracts and preparations thereof, Citri aetheroleum, Citronellae aetheroleum, Citrulline, Clazuril, Cloprostenol, Cloprostenol [R, RS-Cloprostenol], Cobalt carbonate, Cobalt dichloride, Cobalt gluconate, Cobalt oxide, Cobalt sulphate, Cobalt trioxide, Coco alkyl dimethyl betaines, Condurango cortex, standardised extracts and preparations thereof, Convallaria majalis, Copper chloride, Copper gluconate, Copper heptanoate, Copper methionate, Copper oxide, Copper sulphate, Coriandri aetheroleum, Corticotrophin, Crataegus, Cupressi aetheroleums, Cysteine, Cytidine, Decoquinat, Dembrexine, Denaverine hydrochloride, Deslorelin acetate, Detomidine, Dexpanthenol, Diclazuril, Dicopper oxide, Diethyl phthalate, Diethyl sebacate, Diethylene glycol monoethyl ether, Digitalis purpurea, Diiodo-L-tyrosine [3,5-Diiodo-L-tyrosine], Dimanganese trioxide, Dimethicone, Dimethyl acetamide, Dimethyl phthalate, Dimethyl sulfoxide, Dinoprost, Dinoprost tromethamine, Diprophylline, Doxapram, D-Phe<sup>6</sup>-luteinizing hormone releasing hormone, Echinacea, Echinacea purpurea, Enilconazole, Epinephrine, Ergometrine maleate, Etamiphylline camsylate, Etamsylate, Ethanol, Ethyl lactate, Ethyl oleate, Ethylenediaminetetraacetic acid and salts (EDTA), Etiproston tromethamine, Eucalypti aetheroleum, Eucalyptol, Eucalyptus globulus, Euphrasia officinalis, Fenpipramide hydrochloride, Fertirelin acetate, Flumethrin (honey), Foeniculi aetheroleum, Folic acid, Follicle Stimulating Hormone (natural FSH from all species and their synthetic analogues), Formaldehyde, Formic acid, Frangulae cortex, standardised extracts and preparations thereof, Furosemide, Gentianae radix, standardised extracts and preparations thereof, Ginkgo biloba, Ginseng, Glutamic acid, Glutamine, Glutaraldehyde, Glycerol formal, Glycine, Gonadotrophin releasing hormone, Guaiacol, Guanosine, Hamamelis virginiana, Harpagophytum procumbens, Harunga madagascariensis (1:100), Heparin and salts, Heptaminol, Hesperidin, Hesperidin methyl chalcone, Hexetidin, Hippocastini semen, Histidine, Human Chorionic Gonadotrophin (natural HCG and its synthetic analogues), Human menopausal urinary gonadotrophin, Humic acid and its sodium salt, Hyaluronic acid, Hydrochloric acid, Hydrochlorothiazide, Hydrocortisone, Hydrogen peroxide, Hydroxyethylsalicylat, Hydroxyquinoline [8-Hydroxyquinoline], Hyperici oleum, Hypericum perforatum, Inosine, Inositol, Iodine and iodine

inorganic compounds including: Sodium and potassium – iodide, Sodium and potassium – iodate, Iodophor, Iodine organic compounds, Iodoform, Polyvinylpyrrolidone – iodine, Iron ammonium citrate, Iron dextran, Iron dichloride, Iron glucoheptonate, Iron sulphate, Isobutane, Isoflurane, Isoleucine, Isopropanol, Isoxsuprine, Jecoris oleum, Juniperi fructus, Ketamine, Ketanserin tartrate, Ketoprofen, Lachnanthes tinctoria, Lactic acid, Lanolin, Lauri folium aetheroleum, Lauri fructus, Lavandula aetheroleum, Lecirelin, Lespedeza capita, Leucine, Levomethadon, Levothyroxine, Lidocaine hydrochloride, Linear alkyl benzene sulphonic acids, Lini oleum, Lobaria pulmonaria, Lobeline, Luprostiol, Luteinizing Hormone (natural LH from all species and their synthetic analogues), Lysine, Magnesium, Magnesium acetate, Magnesium aluminium silicate, Magnesium aspartate, Magnesium carbonate, Magnesium chloride, Magnesium citrate, Magnesium gluconate, Magnesium glutamate, Magnesium glycerophosphate, Magnesium hydroxide, Magnesium hypophosphite, Magnesium orotate, Magnesium oxide, Magnesium phosphate, Magnesium stearate, Magnesium sulphate, Magnesium trisilicate, Majorana herba, Malic acid, Manganese carbonate, Manganese chloride, Manganese gluconate, Manganese glycerophosphate, Manganese oxide, Manganese pidolate, Manganese ribonucleate, Manganese sulphate, Mannitol, Matricaria recutita, Matricariae flos [Chamomilla], Mecillinam, Medicago sativa, Medroxyprogesterone acetate, Melatonin, Melissa aetheroleum, Melissa folium, Menadione [Vitamin K3], Menbutone, Mentha arvensis aetheroleum, Mentha piperita, aetheroleum, Menthol, Mepivacaine, Mercaptamine hydrochloride, Methionine, Methyl nicotinate, Methyl salicylate, Methylbenzoate, Methylpyrrolidone [1-Methyl-pyrrolidone], Millefolii herba, Mineral hydrocarbons, low to high viscosity including microcrystalline waxes, approximately C10-C60, aliphatic, branched aliphatic and salicylic compounds, Monothioglycerol, Montanide, Myglyol, Myristica aetheroleum, Natamycin, Neostigmine, Nickel gluconate, Nickel sulphate, Nicoboxil, Nonivamide, Novobiocin (meat), Okoubaka aubrevillei, Oleyloleat, Omeprazole, Orgotein, Ornithine, Orotic acid, Oxalic acid, Oxidation products of terebinthinae oleum, Oxytocin, Pancreatin, Papain, Papaverine, Paracetamol, Parconazole, Pepsin, Peracetic acid, Phenol, Phenylalanine, Phloroglucinol, Phytolacca americana, Phytomenadione [Vitamin K1], Piperazine dihydrochloride (chicken meat), Piperonyl butoxide, Polaxalene, Poliresulene, Poloxamer, Polyethylene glycol stearates with 8-40 oxyethylene units, Polyethylene glycol-15-hydroxystearate, Polyethylene glycol-7-glyceryl-cocotate, Polyethylene glycols (molecular weight ranging from 200 to 10.000), Polyoxyl castor oil with 30 to 40 oxyethylene units, Polyoxyl hydrogenated castor oil with 40 to 60 oxyethylene units (Fatty acid polyethylene glycol ester), Polysorbate 80, Polysulphated glycosaminoglycan, Potassium bromide, Potassium DL-aspartate, Potassium glucuronate, Potassium glycerophosphate, Potassium nitrate, Potassium selenate, Praziquantel, Pregnant Mare Serum Gonadotrophin, Prethcamide, Procaine, Proline, Propane, Propylene glycol, Prunus laurocerasus, Pyrantel embonate, Pyrethrum extract, Pyrrolidone [2-Pyrrolidone], Quatresin, Quercus cortex, Quillaia saponins, R-cloprostenol, Rhei radix, Ricini oleum, Rifaximin (meat), Romifidine, Rosmarini aetheroleum, Rosmarini folium, Ruscus aculeatus, Ruta graveolens, Salicylic acid, Salviae folium, Sambuci flos, Selenicerus grandiflorus, Serenoa repens, Serine, Serotonin, Silybum marianum, Sinapis semen, Sodium 2-methyl-2-phenoxypropanoate, Sodium acetylsalicylate, Sodium benzyl 4-hydroxybenzoate, Sodium boroformiate, Sodium butyl 4-hydroxybenzoate, Sodium cetostearyl sulphate, Sodium chloride, Sodium chlorite, Sodium chromoglycate, Sodium dichloro-isocyanurate, Sodium dioctylsulfosuccinate, Sodium formaldehyde-sulphoxylate, Sodium glycerophosphate, Sodium hypophosphite, Sodium lauryl-sulphate, Sodium propionate, Sodium pyrosulphite, Sodium salicylate, Sodium selenate, Sodium selenite, Sodium stearate, Sodium thiosulphate, Solidago virgaurea Somatosalm, Sorbitan sesquioleate, Sorbitan trioleate, Strychni semen [Nux vomica], Strychnine, Sulfoguaiacol, Sulphur, Symphyti radix, Syzygium cumini, Tannin, Tartaric acid [L-tartaric acid] and mono- and di-basic salt of sodium, potassium and calcium, Tau-fluvalinate, Terebinthinae aetheroleum rectificatum, Terebinthinae laricina, Terpin hydrate, Tetracaine, Theobromine, Theophylline, Thiamylal, Thiomersal, Thiopental sodium, Thiotic acid, Threonine, Thuja occidentalis, Thymi, etheroleum, Thymidine, Thymol, Tiaprost, Tiliae flos, Timerfonate, Tiludronic acid, disodium salt, Toldimphos, Tosylchloramide sodium, Tragacanth, Tricaine methane sulphonate, Trichlormethiazide, Trimethylphloro-glucinol, Trypsin, Tryptophan, Turnera diffusa, Tyrosin, Urea, Urginea maritima, Uridine, Urticae herba, Valine, Vetrabutine hydrochloride, Vincamine, Virola sebifera (1:100), Viscum album, Vitamin A, Vitamin B1, Vitamin B12, Vitamin B2, Vitamin B3, Vitamin B5, Vitamin B6, Vitamin D, Vitamin E, Wool alcohols, Xylazine hydrochloride, Zinc acetate, Zinc aspartate, Zinc chloride, Zinc gluconate, Zinc oleate, Zinc oxide, Zinc stearate, Zinc sulphate, Phoxim (chicken), Toltrazuril (bovine).

## SWEDEN

### Information on veterinary drugs without ADI/MRL.

The 15<sup>th</sup> CCRVDF agreed to establish a Working Group to develop recommendations on how to deal with veterinary drugs without ADI/MRLs. The Working Group will carry out specific tasks on the basis of the information received by governments and interested international organizations on the following questions. Sweden has expressed interest in contributing to such working group and would like to submit the following comments:

**(i) All compounds with no Codex MRLs used at national level for food animals**

- All substances used in the European Union that are included in Annex I, II and III of Regulation (EC) 2377/90 for which no Codex MRLs have been established.
- Substances classified as feed additives in the European Union under Council Regulation (EC) 1831/2003 and used in food producing animals, i.e. coccidiostatics for which no Codex MRLs have been established, listed in Council Directive (EC) 70/524/EEC, Annex I.
- Some pesticides used in the European Union both under Council Regulation (EC) 2377/90 and Council Directive (EC) 98/8 (concerning the placement of biocidal products on the market) as well as Council Directive (EC) 86/363 (concerning residues in animals unintentionally exposed for pesticides through feed) which might have different MRLs for the same substance and for which no Codex MRLs have been established.

**(ii) Compounds in use that raise health concerns**

All pharmacologically active substances used in veterinary medicines in the European Union have been evaluated concerning food safety and are included in one of the Annexes I, II or III of Council Regulation (EC) 2377/90. Thus, no substances are allowed to be used for food producing animals if they could raise health problems for the consumer in respect of their permitted use in the European Union. However, there are some substances in Annex II of Council Regulation (EC) 2377/90 that have not been assigned an ADI and have been included in Annex II for special provisions. Thus, these substances might raise health concerns if they are used off label, e.g. lidocaine and xylazine.

**(iii) Compounds in use that create trade problems; compounds recommended for inclusion in a negative list and the reasons for their inclusion in that list**

Substances prohibited in the European Union might create trade problems, i.e. the substances listed in Annex IV to Council Regulation (EC) 2377/90, i.e. nitrofurans including furazolidone, ronidazole, dapson, chloramphenicol, dimetridazole, colchicines, chlorpromazine, metronidazole, chloroform and *Aristolochia spp.* The reasons for their inclusion are described in the CVMP (Committee for Medicinal Products for Veterinary Use) Summary Reports for each compound at the EMEA (European Medicines Agency) website ([www.emea.eu.int](http://www.emea.eu.int)). In addition, there are some substances where the company has not managed to present enough data for a proper risk evaluation and establishment of ADI/MRLs. Examples of such substances are some of the pyrazolones (phenylbutazone, ramifenazone and phenazone), acepromazine and malachite green. These substances, might create trade problems if they are used in countries outside the EU.

**(iv) National or regional MRLs (if any)**

See para (i)

**(v) Other tolerances or application of an analytical limit of detection or determination**

Minimum Required Performance Limits (RPL= Required Performance Limit of analytical methods used for substances for which no permitted limit has been established) have been established by the European Union for chloramphenicol, medroxyprogesteron, malachite green, nitrofurans metabolites including furazolidone, furaldatone, nitrofurantoin and nitrofurazone according to Council Directive (EC) 96/23 and changes in Decision 2002/675/EC.

**UNITED STATES****i. All compounds with no Codex MRLs used at national level for food animals.**

Table 1 provides a list of new animal drugs approved for use in the U.S. in food producing animals but for which it has been determined that a tolerance is not needed in at least one species or matrix. The terms “not needed” and “not required” have been used interchangeably by the U.S. for this list of new animal drugs where no tolerance has been established. A decision that a tolerance is not needed or not required is based on the conclusion that under the approved conditions of use, or potential conditions of misuse, the concentration of residues in edible tissues would not be of concern for human consumption. Examples may include limited oral bioavailability of the new animal drug (e.g., chorionic gonadotropin) or extensive and rapid metabolism of residues to benign endogenous compounds (e.g., formalin). It is the current practice to establish a tolerance for a new animal drug for use in a given food animal whenever practicable.

Tolerances of zero, or “no residue” essentially represent a “sensitivity of the method” approach, based on the limit of analytical detection at the time the tolerance was established. This approach generally reflects older approvals.

**ii. Compounds in use that raise health concerns.**

**iii. Compounds in use that create trade problems: Compounds recommended for inclusion in a negative list and the reasons for their inclusion in that list.**

These two bullets are answered together. New animal drugs approved for use in food animals in the U.S. that are used in accordance with the conditions of approval do not raise health concerns.

It has been noted that trade problems have occurred in some instances where the U.S. tolerance exceeds the Codex MRL, or the MRL of the importing national authority.

There is a list of compounds that are of sufficient human food safety concern that they are prohibited from extra-label use (provided in Table 2 and codified under the U.S. Code of Federal Regulations [21 CFR 530.41]). As described below, extra-label use is permitted in food animals under certain conditions.

**iv. National or regional MRLs (if any).**

Table 3 provides a list of the U.S. tolerances and the corresponding Codex MRLs. The table is a compilation of all U.S. tolerances and Codex MRLs.

**v. Other tolerances or application of an analytical limit of detection or determination.**

The tolerance is the maximum concentration of a new animal drug residue that can remain in an edible tissue of a treated animal and not raise a concern for human food safety. As used by the U.S., the term *safe concentration* refers to the concentration of total residues of the drug calculated by multiplying the Acceptable Daily Intake (ADI, in mg/kg bw per day) by a standardized human body weight (60 kg) and dividing the results by a consumption factor. Consumption factors used by the U.S. are 0.3 kg for muscle, 0.1 kg for liver, and 0.05 kg for kidney and fat. Consumption factors for eggs and milk are 0.1 kg and 1.5 L, respectively. A *tolerance* may be currently defined as a concentration in the target tissue by a regulatory method that measures the concentration of the marker residue (parent, metabolite, or some combination of metabolites). Because the concentration of the marker residue is in a known relationship to the concentration of total residues, the tolerance is in a known relationship to the safe concentration and thus to the ADI. In the case of a microbiological ADI, the tolerance may only refer to those residues with microbiological activity.

It is permissible in the U.S. to administer a drug approved for human or veterinary use in an animal species for which it is not approved, or in an animal species for which it is approved but for an indication for which it is not approved (*i.e.*, extra-label use), as long as certain conditions are met. The conditions are detailed in 21 CFR 530. The use is restricted to the order of a licensed veterinarian and to treatment when the health of the animal is threatened or suffering or death may result from failure to treat. There is a provision in the U.S. to establish a *safe level* in the edible tissues of a food animal for residues resulting from the extra-label drug use (detailed in 21 CFR 530.21-24). A *safe level* may differ from a *safe concentration* or tolerance in that the *safe level* may or may not be predicated on an ADI. Also, establishment of a *safe level* does not represent an approval of the (unapproved) extra-label use of the drug. A *safe level* would be used much like a U.S. tolerance or Codex MRL to establish the maximum concentration of residues of the drug allowed in edible tissue and below which no human food safety concerns are raised. There are no *safe levels* established at this time.

It is possible in the U.S. to establish a tolerance for residues of an unapproved drug in the edible tissues of an imported food animal product. Often described as an *import tolerance*, this would establish the maximum concentration of residues of the unapproved drug allowed in the imported food products derived from the treated animal. While no *import tolerances* have yet been established, it is anticipated that such a tolerance would be similar to that established for an approved new animal drug in the U.S.

The regulation of residues of a carcinogenic approved new animal drug provides another tolerance-like approach for the U.S. Rather than establishing a tolerance, the U.S. would establish an  $R_m$  which is concentration of marker residue in the target tissue when the residue of carcinogenic concern is equal to  $S_m$ , the concentration of residue in a specific edible tissue corresponding to a maximum lifetime risk of cancer in the test animals of 1 in 1 million (codified under 21 CFR 500.80-92). Unlike a tolerance, residues detectable by the regulatory analytical method, even if below the  $R_m$  would be considered violative and subject to regulatory action. The acceptability of the residues is therefore driven, in part, by the sensitivity of the analytical method. The U.S. currently has one new animal drug for use in food animals that is regulated as a carcinogen, carbadox. The  $R_m$  values are provided in Table 4.

Finally, the analytical limit of detection is commonly used as a threshold for regulatory action in sampling programs of domestic or imported food products for new animal drugs that lack a U.S. domestic tolerance. In the absence of an approved tolerance (or as described above, a safe level or import tolerance), any detectable residue is sufficient to consider the imported product adulterated under U.S. law and subject to regulatory action

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRLs mg/kg	COMMENTS
Azaparone	Pig Muscle Liver Kidney Fat	Not required	0.06 0.1 0.1 0.06	
Bovine Somatotropin	Cattle Edible tissues Milk	Not specified <sup>15</sup>	Not specified	Codex MRLs as "Not Specified" have been recommended by CRVDF but not adopted by Codex.
Colistimethate sodium (colistin sodium methane sulfonate)	Chickens Edible tissues	Not required	none	
Fenprostalene	Cattle Edible tissues Pig Edible tissues	Not needed	none	The U.S. established safe concentrations for total residues of fenprostalene in cattle and swine.
Gonadotropin or Gonadorelin hydrochloride or diacetate tetrahydrate [Gonadotrophins (LH, FSH) releasing hormone, GnRH]	Cattle Edible tissues Fish Edible tissues	Not required Not required	none	The U.S. tolerances are not required for cattle and fish edible tissues.
Lincomycin	Chicken Muscle Liver Kidney Fat Skin/Fat Pig Muscle Liver Kidney Fat Skin/Fat Cattle Milk	Not required      0.1 0.6	0.2 0.5 0.5 0.1 0.3  0.2 0.5 1.5 0.1 0.3  0.15	A U.S. tolerance is not required for edible tissues of chicken.

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRLs mg/kg	COMMENTS
Monensin	Cattle Edible tissues <sup>a</sup>	0.05	none	The U.S. tolerance is established in the edible tissues of cattle, and goats, and not needed in the edible tissues of chicken, turkey, and quail.
	Chicken Turkey and Quail Edible tissues	Not needed		
	Goat Edible tissues	0.05		
Morantel tartrate	Cattle Liver	0.7 <sup>12</sup>		A U.S. tolerance is not required for milk.
	Goat Liver Milk	0.7 <sup>12</sup> Not required		
Trenbolone acetate	Cattle Muscle	Not needed	0.002 0.01	Codex MRLs are for $\beta$ -trenbolone in muscle and $\alpha$ -trenbolone in liver. A U.S. tolerance in the edible tissue of cattle is not needed.
	Liver			
Virginiamycin	Chicken	Not required		U.S. tolerances are established for muscle, liver, kidney, and skin/fat of swine, and are not required for the edible tissues of chicken and cattle.
	Cattle	Not required		
	Pig Muscle	0.1		
	Liver	0.3		
	Kidney Skin/Fat	0.4 0.4		
Zeranol	Cattle Edible tissues	Not required	0.002 0.01	A U.S. tolerance is not required for the edible tissues of cattle, and no residue is permitted in the edible tissues of sheep.
	Muscle			
	Liver			
	Sheep Edible tissues			

<sup>a</sup>The term “edible tissue” refers to meat (muscle, liver, kidney, fat/skin). It does not include milk or eggs.

Drug Name	Rationale
1. Chloramphenicol	Concern for aplastic anemia and carcinogenicity.
2. Diethylstilbestrol (DES)	Concern for developmental toxicity and carcinogenicity.
3. Dimetridazole	Concern for systemic toxicity and carcinogenicity.
4. Ipronidazole	Concern for systemic toxicity and carcinogenicity.
5. Other nitroimidazoles	Concern for systemic toxicity and carcinogenicity.
6. Furazolidone	Concern for carcinogenicity.
7. Nitrofurazone	Concern for carcinogenicity.
8. Sulfonamide drugs in lactating dairy cattle (except approved uses of sulfadimethoxine, sulfabromomethazine, and sulfaethoxyipyridazine)	Concern for misuse resulting in residues in the milk of lactating dairy subsequent to the use of other than the approved sulfonamide drugs.
9. Fluoroquinolones (except approved uses in cattle, chickens and turkeys) <sup>2</sup>	Concern for induction of antimicrobial resistance subsequent to the veterinary use and transfer of the resistance characteristics to the human consumer, resulting in an inability to treat a resistant disease in the human consumer.
10. Glycopeptides	Concern for induction of antimicrobial resistance subsequent to the veterinary use and transfer of the resistance characteristics to the human consumer, resulting in an inability to treat a resistant disease in the human consumer
11. Phenylbutazone in female dairy cattle 20 months of age or older	Concern for carcinogenicity and hypersensitivity reactions.



<sup>1</sup>No tolerances have been established for the use of these drugs in food animals other than the approved uses.

<sup>2</sup>U.S. FDA is currently in process revoking the approved use of enrofloxacin, a fluoroquinolone, in chickens.

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Abamectin	Cattle Muscle Liver Kidney Fat	None	0.1 0.05 0.1	
2-Acetylamino-5-nitrothiazole	Turkey Edible tissues	0.1	none	
Aklomide	Chickens Muscle, Liver Skin/Fat	4.5 <sup>1</sup> 3	none	
Albendazole	Cattle Muscle Liver Kidney Fat Milk Sheep Muscle Liver	0.05 <sup>2</sup> 0.2   0.05 0.25	0.1 5 5 0.1 0.1	Codex MRLs are for species "Not specified".
Alpha-cypermethrin	Cattle Muscle Liver Kidney Fat Milk Sheep Muscle Liver Kidney Fat Milk	none	0.05 0.05 0.05 1.0 0.1  0.05 0.05 0.05 1.0 0.1	MRLs were proposed by the 2004 JECFA, with both alpha cypermtherin and cypermethrin based on the alpha cypermethrin ADI. The Codex marker is total cypermethrin residues.
Altrenogest	Pig Muscle Liver	0.001 0.004	none	
Amoxicillin	Cattle Muscle Liver Kidney Milk	0.01 0.01 0.01 0.01	none	The U.S. tolerance is for edible tissues and milk.
Ampicillin	Cattle, Muscle Liver Kidney Milk Pig Muscle Liver Kidney	0.01 0.01 0.01 0.01  0.01 0.01 0.01	none	The U.S. tolerance in cattle is for edible tissues and milk, and for edible tissues in swine.

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Amprolium	Calves		none	
	Muscle	0.5		
	Liver	0.5		
	Kidney	0.5		
	Fat	2.0		
	Chicken			
	Muscle	0.5		
	Liver	1		
	Kidney	1		
	Eggs			
	Whole	4		
	Yolk	8		
	Turkeys			
	Muscle	0.5		
	Liver	1		
	Kidney	1		
	Eggs			
Whole	4			
Yolk	8			
Pheasants				
Muscle	0.5			
Liver	1			
Apramycin	Pig Kidney	0.1	none	
Arsenic	Chickens and Turkeys		none	The U.S. tolerances are for chicken and turkey are for muscle, eggs, and edible by-products. In swine, the tolerances are for liver, kidney, muscle and edible by-products.
	Muscle	0.5		
	Liver	2		
	Eggs	0.5		
	Edible by-products			
	Turkeys			
	Muscle	0.5		
	Liver	2		
	Eggs	0.5		
	Edible by-products	2		
	Pig			
	Muscle	0.5		
Liver	2			
Kidney	2			
Edible by- products	0.5			
Azaparone	Pig	Not required	0.06 0.1 0.1 0.06	
	Muscle			
	Liver			
	Kidney			
	Fat			

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Bacitracin	Cattle Muscle Liver Kidney Milk Chicken Muscle Liver Eggs Pig Muscle Liver Kidney Pheasant Muscle Liver Eggs Quail Muscle Liver Eggs Turkey Muscle Liver Eggs	0.5 0.5	none	The U.S. tolerances are for edible tissues and for milk and eggs.
Bovine Somatotropin	Cattle Edible tissues Milk	Not specified <sup>15</sup>	Not specified	Codex MRLs as “Not Specified” have been recommended by JECFA and the CRVDF but not adopted by Codex.  The U.S. has determined it is not necessary to establish an ADI or safe concentration and therefore a tolerance is not required.
Buquinolate	Chickens Muscle Liver Kidney Skin/Fat Egg yolk Whole egg	0.1 0.4 0.4 0.4 0.5 0.2	none	
Carazolol	Pig Muscle Liver Kidney Fat/Skin	none	0.005 0.025 0.025 0.005	
Carbadox	Pig Muscle Liver	0.03 <sup>3</sup>	0.005 0.03	The 60 <sup>th</sup> JECFA recommended that current MRLs be withdrawn. CCRVDF has not reviewed the recommendation.
Carbomycin	Chickens Edible tissues	0	none	

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Ceftiofur	Cattle			The U.S. marker residue is bound/conjugated desfuoylceftiofur and the MRLs / tolerances are expressed as desfuoylceftiofur equivalents. A U.S. tolerance is not required in the edible tissue of swine, poultry, and sheep.
	Muscle	1	1	
	Liver	2	2	
	Kidney	8 <sup>4</sup>	6	
	Fat		2	
	Milk	0.1	0.1	
	Pig	Not required		
	Muscle		1	
	Liver		2	
	Kidney		6	
	Fat		2	
	Sheep			
	Edible tissue	Not required		
	Goats			
	Muscle	1		
	Liver	2		
	Kidney	8 <sup>4</sup>		
Fat				
Milk	0.1			
Poultry				
Edible tissue	Not required			
Cephapirin	Dairy Cattle		none	
	Edible tissues	0.1		
	Milk	0.02		
Chlorhexidine	Calves		none	The U.S. tolerance is for edible tissues.
	Muscle	0		
	Liver	0		
	Kidney	0		
Chlorobutanol	Dairy animals		none	
	Milk	0		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Chlortetracycline	Chickens and Turkeys			<p>The Codex MRLs are for parent drugs, singly or in combination.</p> <p>Codex MRLs are generic for poultry. and for cattle.</p> <p>In the U.S., the tolerances apply to the sum of chlortetracycline, oxytetracycline, and tetracycline; the tolerances for beef cattle includes non-lactating dairy cows.</p>
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Skin/Fat			
	Fat	12		
	Eggs	0.4	0.4	
	Ducks			
	Muscle	2		
	Liver	6		
	Kidney	12		
	Fat	12		
	Pig			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Fat	12		
	Calves			
	Muscle	2		
	Liver	6		
	Kidney	12		
	Fat	12		
	Beef Cattle			
	Muscle	2	0.2	
Liver	6	0.6		
Kidney	12	1.2		
Fat	12			
Milk			0.1	
Sheep				
Muscle	2	0.2		
Liver	6	0.6		
Kidney	12	1.2		
Fat	12			
Milk			0.1	
Clenbuterol	Cattle	none		<p>The U.S. has an approved use of clenbuterol in horses but does not consider this a food animal and there is no established tolerance.</p>
	Muscle		0.002	
	Liver		0.006	
	Kidney		0.006	
	Fat/Skin		0.002	
	Milk		0.005	
	Horse			
	Muscle		0.002	
	Liver		0.006	
	Kidney		0.006	
Fat/skin		0.002		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Clopidol	Chickens		none	The U.S. tolerance in pig is for edible tissues.
	Muscle	5		
	Liver	15		
	Kidney	15		
	Turkeys			
	Muscle	5		
	Liver	15		
	Kidney	15		
	Cattle			
	Muscle	0.2		
	Liver	1.5		
	Kidney	3		
	Milk	0.02		
	Goat			
	Muscle	0.2		
	Liver	1.5		
	Kidney	3		
	Milk	0.02		
	Sheep			
	Muscle	0.2		
Liver	1.5			
Kidney	3			
Milk	0.02			
Pig				
Muscle	0.2			
Liver	0.2			
Kidney	0.2			
Clorsulon	Cattle		none	
	Muscle	0.1		
	Kidney	1.0		
Closantel	Cattle	none	1.0	
	Muscle			
	Liver			
	Kidney			
	Fat/Skin			
	Sheep			
	Muscle			
	Liver			
	Kidney			
Fat/Skin				
Cloxacillin	Cattle	0.01	none	The U.S. tolerances are for edible tissues and milk
	Muscle			
	Liver			
	Kidney			
	Milk			
Colistimethate sodium (colistin sodium methane sulfonate)	Chickens	Not required	none	
	Edible tissues			
Cyfluthrin	Cattle	none	0.02	
	Muscle			
	Liver			
	Kidney			
	Skin/Fat			

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Cyhalothrin	Cattle	none		Codex MRLs have been recommended by the JECFA but not yet accepted by the CODEX.
	Muscle			
	Liver			
	Kidney			
	Fat/Skin			
	Milk			
	Sheep			
	Muscle			
	Liver			
	Kidney			
	Fat/Skin			
	Milk			
	Pig			
	Muscle			
Liver				
Kidney				
Fat/Skin				
Cypermethrin	Cattle	none		MRLs were proposed by the 2004 JECFA, with both alpha cypermethrin and cypermethrin based on the alpha cypermethrin ADI. The Codex marker is total cypermethrin residues.
	Muscle			
	Liver			
	Kidney			
	Fat/Skin			
	Milk			
	Sheep			
	Muscle			
	Liver			
	Kidney			
Fat/Skin				
Milk				
Danofloxacin	Cattle	0.2	0.2	The Codex MRL for chicken is for fat/skin in normal proportions.
	Muscle			
	Liver			
	Kidney			
	Fat			
	Pig			
	Muscle, Fat			
	Liver			
	Kidney			
	Chicken			
	Muscle			
	Liver, Kidney			
Fat				
Decoquate	Chickens	1	none	The U.S. tolerances are for muscle and other edible tissues
	Muscle			
	Kidney			
	Liver			
	Fat			
	Cattle			
	Muscle			
	Kidney			
	Liver			
	Fat			
	Goats			
	Muscle			
	Kidney			
	Liver			
Fat				

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Deltamethrin	Cattle	none		
	Muscle		0.03	
	Liver		0.05	
	Kidney		0.05	
	Skin/Fat		0.50	
	Milk		0.03	
	Sheep			
	Muscle		0.03	
	Liver		0.05	
	Kidney		0.05	
	Skin/Fat		0.50	
	Milk		0.03	
	Chicken			
	Muscle		0.03	
	Liver		0.05	
Kidney	0.05			
Skin/Fat	0.50			
Salmon				
Muscle	0.03			
Dichlorvos	Pig	0.1	none	The U.S. tolerances are for edible tissues
	Muscle			
	Kidney			
	Liver			
Diclazuril	Fat	0.1		Codex MRLs are generic for poultry. The 60 <sup>th</sup> JECFA recommended some new (revised) MRLs. These have not been considered by CCRVDF and were not considered at the 26 <sup>th</sup> CAC.
	Chickens			
	Muscle	0.5	0.5	
	Liver	3	3	
	Kidney		2	
	Skin/Fat	1	1	
	Turkeys			
	Muscle	0.5	0.5	
	Liver	3	3	
	Kidney		2	
	Skin/Fat	1	1	
	Sheep,			
	Muscle		0.5	
	Liver		3.0	
Kidney		2.0		
Fat		1.0		
Rabbit				
Muscle		0.5		
Liver		3.0		
Kidney		2.0		
Fat		1.0		
Dicyclanil	Sheep	none		
	Muscle		0.15	
	Liver		0.125	
	Kidney		0.125	
Fat		0.2		



DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Dihydro- streptomycin	Cattle			
	Muscle	0.5	0.6	
	Liver	0.5	0.6	
	Kidney	2.0	1	
	Fat	0.5	0.6	
	Milk	0.125	0.2	
	Pig			
	Muscle	0.5	0.6	
	Liver	0.5	0.6	
	Kidney	2.0	1	
	Fat	0.5	0.6	
	Sheep			
	Muscle		0.6	
	Liver		0.6	
	Kidney		1	
Fat		0.6		
Milk		0.2		
3,5-Dinitro- benzamide	Chickens	No residue		
	Muscle			
	Liver			
	Kidney			
Diminazene	Eggs			
	Cattle	none		
	Muscle		0.5	
	Liver		1.2	
Doramectin	Kidney		6.0	
	Milk		.015	
	Cattle			
	Muscle	0.03	0.01	
Enrofloxacin	Liver	0.1	0.1	
	Kidney		0.03	
	Fat		0.15	
	Pig			
	Muscle		0.005	
	Liver	0.16	0.1	
	Kidney		0.03	
	Fat		0.15	
	Chickens			
	Muscle	0.3 <sup>5</sup>		The U.S. is in a process to withdraw the approval (and tolerance) in chicken. Tolerances are only established in liver.
Liver				
Kidney				
Eggs				
Turkeys				
Muscle	0.3 <sup>5</sup>			
Liver				
Kidney				
Eggs				
Cattle				
Muscle	0.1 <sup>5</sup>			
Liver				
Kidney				
Milk				
Eprinomectin	Cattle			
	Muscle	0.1	0.1	
	Liver	4.8 <sup>6</sup>	2	
	Kidney		0.3	
	Fat		0.25	
Milk	0.012	0.02		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Erythromycin	Pig Edible tissues Beef Cattle Edible tissues Milk Chickens and Turkeys Edible tissues Eggs	0.1  0.1 0  0.125 0.025	none	
Estradiol and related esters	Steers, Heifers and Calves Muscle Liver Kidney Fat	120 ng/kg 240 ng/kg 360 ng/kg 480 ng/kg	Unnecessary	U.S. codified values are increments, in parts per trillion (ng/kg), above the amounts naturally present in untreated animals. Codex listing is for Estradiol 17beta in cattle, and notes that residues resulting from the use of estradiol as a growth promoter, used in accordance with good animal husbandry practice, is unlikely to pose a hazard to human health
Ethopabate	Chickens Muscle Liver Kidney	0.5 1.5 <sup>7</sup> 1.5 <sup>7</sup>	none	
Ethylenediamine	Dairy Animals Milk	0	none	The U.S. tolerance is only for milk.
Famphur	Cattle Muscle Liver Kidney Milk	0.1 <sup>8</sup> 0.1 <sup>8</sup> 0.1 <sup>8</sup>	none	U.S. tolerance is for residues of famphur - including its oxygen analog - in or on meat, fat, or meat by-products
Febantel	Cattle Muscle Liver Kidney, Fat Milk Goats Muscle Liver Kidney, Fat Pig Muscle Liver Kidney, Fat Sheep Muscle Liver Kidney, Fat Milk Turkey Muscle Liver Kidney, Fat Horse Muscle, Kidney, Fat Liver	none	0.1 0.5 0.1 0.1  0.1 0.5 0.1  0.1 0.5 0.1  0.1 0.5 0.1  0.1 0.5 0.1	Codex adopted group MRLs for febantel, fenbendazole and oxfendazole. See fenbendazole comments.

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS	
Fenbendazole	Cattle			The U.S., the target tissue is liver. In the U.S., in cattle, pigs and goats the marker residue is fenbendazole; in turkeys the marker residue is fenbendazole sulfone and the marker residue for cattle milk is fenbendazole sulfoxide  Codex group MRLs for febantel, fenbendazole and oxfendazole are the sum of fenbendazole, oxfendazole and oxfendazole sulfone, expressed as oxfendazole sulfone equivalents.	
	Muscle	0.4	0.1		
	Liver	0.8 <sup>9</sup>	0.5		
	Kidney, Fat		0.1		
	Milk	0.6	0.1		
	Goats				
	Muscle	0.4	0.1		
	Liver	0.8	0.5		
	Kidney, Fat		0.1		
	Pig				
	Muscle	2	0.1		
	Liver	6	0.5		
	Kidney, Fat		0.1		
	Sheep				
	Muscle		0.1		
	Liver		0.5		
	Kidney, Fat		0.1		
	Milk		0.1		
Turkey					
Muscle	2	0.1			
Liver	6	0.5			
Kidney, Fat		0.1			
Horse					
Muscle, Kidney, Fat			0.1		
Liver			0.5		
Fenprostalene	Cattle Edible tissues	Not needed	none	The U.S. established safe concentrations for total residues of fenprostalene in cattle and swine.	
Pig Edible tissues					
Florfenicol	Cattle		none		
	Muscle	0.3 <sup>10</sup>			
	Liver	3.7 <sup>10</sup>			
	Pigs				
Pigs	Muscle	0.2			
	Liver	2.5			
Fluazuron	Cattle	none			
	Muscle				0.2
	Liver				0.5
	Kidney				0.5
Fat	7.0				
Flubendazole	Pig	none			
	Muscle				0.01
	Liver				0.01
	Poultry				
	Muscle				0.2
	Liver				0.5
Eggs	0.4				

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Flumequine	Cattle	none		The 2004 JECFA recommended MRLs. Codex tolerance is proposed for residues of a non-genotoxic carcinogen.
	Muscle			
	Liver			
	Kidney			
	Fat			
	Sheep			
	Muscle			
	Liver			
	Kidney			
	Fat			
	Pig			
	Muscle			
	Liver			
	Kidney			
	Fat			
	Chicken			
Muscle				
Liver				
Kidney				
Fat				
Trout				
Muscle				
Giant Prawn				
Muscle				
Flunixin meglumine	Cattle	0.025	none	
	Muscle			
	Liver	0.125		
Gentamicin sulfate	Turkey	0.1		The U.S. tolerances in turkey and chicken are for edible tissues. Codex MRLs are for total residues in edible tissues determined as parent drug.
	Muscle			
	Liver			
	Kidney			
	Eggs			
	Chicken			
	Muscle			
	Liver			
	Kidney			
	Eggs			
	Pig			
	Muscle			
	Liver			
	Kidney			
	Fat			
	Cattle			
Muscle				
Liver				
Kidney				
Fat				
Milk				
Gonadotropin or Gonadorelin hydrochloride or diacetate tetrahydrate [Gonadotrophins (LH, FSH) releasing hormone, GnRH]	Cattle	Not required	none	The U.S. tolerances are not required for cattle and fish edible tissues.
	Edible tissues			
	Fish	Not required		
	Edible tissues			
Halofuginone hydrobromide	Chickens	0.16	none	U.S. tolerance is based on the hydrobromide salt.
	Liver			
	Turkeys			
	Liver	0.13		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Haloxon	Cattle Edible tissues	0.1	none	The U.S. tolerances of for edible tissues in cattle.
Hydrocortisone	Milk	0.01	none	The U.S. tolerance is only for milk.
Hygromycin B	Pig and Poultry Edible tissues Eggs	0 0		
Imidocarb	Cattle Muscle Liver Kidney Fat Milk	none	0.3 1.5 2.0 0.5 0.5	Prohibited from use in food producing animals in the U.S.; no tolerance established.
Isometamidium	Cattle Muscle Liver Kidney Fat Milk	none	0.1 0.5 1.0 0.1 0.1	
Ivermectin	Cattle Muscle Liver Fat Milk Sheep Muscle Liver Fat Pig Muscle Liver Fat American bison Liver Reindeer Liver	0.01 0.1 <sup>11</sup>    0.03  0.02 0.02  0.015	 0.1 0.04 0.01  0.015 0.02  0.015 0.02	
Laidlomycin	Cattle Liver	0.2	none	
Lasalocid	Chickens Skin/Fat Liver Cattle Liver Sheep Liver Rabbit Liver Turkey Liver Skin/Fat	1.2 0.4  0.7 1.0  0.7 0.4 0.4	none	

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Levamisole hydrochloride	Cattle			The U.S. tolerance is for the edible tissues of cattle sheep and swine.
	Muscle	0.1	0.01	
	Liver	0.1	0.1	
	Kidney	0.1	0.01	
	Fat	0.1	0.01	
	Pig			
	Muscle	0.1	0.01	
	Liver	0.1	0.1	
	Kidney	0.1	0.01	
	Fat	0.1	0.0	
	Poultry			
	Muscle		0.01	
	Liver		0.1	
	Kidney		0.01	
	Fat		0.01	
	Sheep			
Muscle	0.1	0.01		
Liver	0.1	0.1		
Kidney	0.1	0.01		
Fat	0.1	0.1		
Lincomycin	Chicken	Not required		A U.S. tolerance is not required for edible tissues of chicken.
	Muscle		0.2	
	Liver		0.5	
	Kidney		0.5	
	Fat		0.1	
	Skin/Fat	0.3		
	Pig			
	Muscle	0.1	0.2	
	Liver	0.6	0.5	
	Kidney		1.5	
	Fat		0.1	
	Skin/Fat		0.3	
Cattle				
Milk		0.15		
Maduramicin ammonium	Chickens			
	Fat	0.38	none	
Melengestrol acetate	Cattle		none	
	Fat	0.025		
Methylparaben	Dairy animals		none	The U.S. tolerance is only established in milk.
	Milk	0		
Methyl-prednisolone	Milk	0.01	none	The U.S. tolerances is only established in milk.
Metoserpate hydrochloride	Chickens Edible tissues	0.02		The U.S. tolerance is established for edible tissues in chicken.
Monensin	Cattle			The U.S. tolerance is established in the edible tissues of cattle, and goats, and not needed in the edible tissues of chicken, turkey, and quail.
	Edible tissues	0.05		
	Chicken and Turkey			
	Edible tissues	Not needed		
	Goat	0.05		
Edible tissues	Not needed			
Quail				
Morantel tartrate	Cattle			A U.S. tolerance is not required for milk.
	Liver	0.7 <sup>12</sup>		
	Milk	Not required		
	Goat			
	Liver	0.7 <sup>12</sup>		
	Milk	Not required		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Moxidectin	Cattle			Codex noted that there is a very high concentration and great variation in the amount of residues at the injection site in cattle over a 49-day period after dosing
	Muscle	0.05	0.02	
	Liver	0.2	0.1	
	Kidney		0.05	
	Fat		0.5	
	Milk	0.04		
	Deer			
	Muscle		0.02	
	Liver		0.1	
	Kidney		0.05	
	Fat		0.5	
	Sheep			
	Muscle		0.05	
	Liver		0.1	
Kidney		0.05		
Fat		0.5		
Narasin	Chicken		none	
	Fat	0.48		
Neomycin	Cattle			
	Muscle	1.2	0.5	
	Liver	3.6	0.5	
	Kidney	7.2	10	
	Fat	7.2	0.5	
	Milk	0.15	0.5	
	Pig			
	Muscle	1.2	0.5	
	Liver	3.6	0.5	
	Kidney	7.2	10	
	Fat	7.2	0.5	
	Milk	0.15	0.5	
	Sheep			
	Muscle	1.2	0.5	
	Liver	3.6	0.5	
	Kidney	7.2	10	
	Fat	7.2	0.5	
	Milk	0.15	0.5	
	Goat			
	Muscle	1.2	0.5	
	Liver	3.6	0.5	
	Kidney	7.2	10	
	Fat	7.2	0.5	
	Milk	0.15	0.5	
	Turkey			
	Muscle	1.2	0.5	
	Liver	3.6	0.5	
	Kidney		10	
	Fat		0.5	
	Skin/Fat	7.2		
	Chicken			
	Muscle Liver		0.5	
	Kidney		10	
	Fat		0.5	
Eggs		0.5		
Duck				
Muscle Liver		0.5		
Kidney		10		
Fat		0.5		
Eggs		0.5		
Nequinatate	Chicken		none	The U.S. tolerance is for the edible tissues of chicken.
	Edible tissues	0.1		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Nicarbazin	Chickens Muscle Liver Kidney Skin Fat	4 4 4 4	0.2 0.2 0.2 0.2 0.2	The U.S. tolerance is for the edible tissues of chicken.
Novobiocin	Cattle, Chicken Edible tissues Chicken Edible tissues Dairy animals Milk Ducks Edible tissues	1 1 0.1 1	none	The U.S. tolerances in cattle, chicken and duck are for edible tissues, for dairy the tolerance is only for milk.
Nystatin	Pig and Poultry Edible tissues Eggs	0 0	none	The U.S. tolerances are for edible tissues of pig and poultry, and for eggs.
Oleandomycin	Chicken Edible tissues Turkey Edible tissues Pigs Edible tissues	0.15 0.15 0.15	none	The U.S. tolerances are for edible tissues of chicken, turkey, and swine.
Ormetoprim	Chickens Edible tissues Duck Edible tissues Turkeys Edible tissues Chukar Partridge Edible tissues Salmonids Edible tissue Catfish Edible tissue	0.1 0.1 0.1 0.1 0.1 0.1 0.1	none	The U.S. tolerances are for edible tissues of chicken, duck, turkey, chukar partridge, salmonids, and catfish.



DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Oxfendazole	Cattle	0.8	0.1	See comments for fenbendazole.
	Muscle			
	Liver			
	Kidney, Fat			
	Milk			
	Goats			
	Muscle			
	Liver			
	Kidney, Fat			
	Pig			
	Muscle			
	Liver			
	Kidney, Fat			
	Sheep			
	Muscle			
	Liver			
	Kidney, Fat			
	Milk			
	Turkey			
	Muscle			
	Liver			
Kidney, Fat				
Horse				
Muscle, Kidney, Fat				
Liver				
Oxytetracycline	Chicken	2	0.2	See comments for chlortetracycline or tetracycline for US tolerance definition. The U.S. tolerances in cattle are actually for beef cattle, dairy cattle, and calves. Codex MRLs are generic for poultry and cattle. Codex MRLs are generic for fish (muscle) while the U.S. tolerance is for finfish (muscle, or muscle with adhering skin)..
	Muscle			
	Liver	6	0.6	
	Kidney	12	1.2	
	Skin/Fat	12		
	Eggs		0.4	
	Turkey			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Skin/Fat	12		
	Eggs		0.4	
	Cattle			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Fat	12		
	Milk	0.3	0.1	
	Pigs			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Fat	12		
	Sheep			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
Fat	12			
Lobster				
Muscle	2			
Giant Prawn				
Muscle		0.2		
Fin Fish				
Muscle	2	0.2		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Penicillin G	Cattle Edible tissues Muscle, Liver and Kidney	0.05	0.05	Tolerances in U.S. apply to penicillin and the salts of penicillin. Codex MRLs are for benzylpenicillin and procaine benzylpenicillin.
	Pig Edible tissues Muscle, Liver and Kidney	0	0.05	
	Chickens Edible tissues Muscle, Liver and Kidney	0	0.05	Codex MRLs for chicken apply to procaine benzylpenicillin only.
	Pheasant, Quail, Sheep Edible tissues	0		
	Turkeys Edible tissues	0.01		
	Eggs	0		
	Milk	0	0.004	
Phoxim	Cattle Milk	none	0.01	
	Sheep Muscle		0.05	
	Liver		0.05	
	Kidney		0.05	
	Fat		0.4	
	Pig Muscle		0.05	
	Liver		0.05	
	Kidney		0.05	
	Fat		0.4	
	Goat Muscle		0.05	
	Liver		0.05	
	Kidney		0.05	
	Fat		0.4	
Piperazine	Pig, and Poultry Edible tissues	0.1	none	The U.S. tolerances are for the edible tissues of swine and poultry
Pirlimycin	Cattle Muscle	0.3	0.1	Codex MRL has been proposed but not yet accepted.
	Liver	0.5	1.0	
	Kidney		0.4	
	Fat		0.1	
	Milk	0.4	0.1	
Porcine somatotropins	Pig Muscle	none	not specified	The Codex lists MRLs “not specified” due to lack of toxicological concern for the levels of residues of rpST and exogenous IGF-I
	Liver			
	Kidney			
	Fat			
Prednisolone	Milk	0	none	In the U.S., the tolerances apply only to milk in all dairy animals
Prednisone	Milk	0	none	In the U.S., the tolerances apply only to milk in all dairy animals.

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS	
Progesterone	Steers and Calves		Unnecessary	U.S. codified values are increments, listed in parts per million (mg/kg), above the amount naturally present in untreated animals. Codex indicates that residues resulting from the use of progesterone as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health	
	Muscle	0.003			
	Liver	0.006			
	Kidney	0.009			
	Fat	0.012			
	Lambs				
	Muscle	0.003			
	Liver	0.015			
Kidney	0.015				
Fat	0.015				
Propylparaben	Milk	0	none	The U.S. tolerance applies only to the milk of dairy animals.	
Pyrantel tartrate	Pig		none		
	Muscle	1			
	Liver	10			
	Kidney	10			
	Ractopamine	Cattle		0.01 0.04 0.09 0.01 0.01 0.04 0.09 0.01	Codex MRLs were recommended by the 2004 JECFA.
		Muscle	0.03		
Liver		0.09			
Kidney					
Fat					
Pig					
Muscle		0.05			
Liver		0.15			
Kidney					
Fat					
Robenidine hydrochloride	Chicken		none	The U.S. tolerances are for skin/fat, and for edible tissues other than skin and fat.	
	Muscle	0.1			
	Liver	0.1			
	Kidney	0.1			
Skin/Fat	0.2				
Roxarsone	Chicken,		none	The U.S. tolerances are for total residues of arsenic. See comments for arsanilic acid	
	Muscle	0.5			
	Liver	2			
	Eggs	0.5			
	Turkey				
	Muscle	0.5			
	Liver	2			
	Eggs	0.5			
	Edible by-products	2			
	Pig				
	Muscle	0.5			
	Liver	2			
Kidney	2				
Edible by-products other than liver & kidney	0.5				
Salicylic acid	Milk	0	none	In the U.S., the tolerance applies to milk from dairy animals	
Salinomycin	Chicken	Not required	none		
	Skin/Fat				
	Cattle and Pig				
	Liver				
Quail	Not required				

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Sarafloxacin	Chicken Muscle Liver Kidney Fat Turkey Muscle Liver Kidney Fat	none	0.1 0.8 0.8 0.2 0.1 0.8 0.8 0.2	
Semduramycin	Broiler Chicken Muscle Liver	0.13 0.4	none	
Spectinomycin	Chicken Edible tissues Muscle Liver, Fat Kidney Eggs Turkey Edible tissues Cattle Muscle Liver, Fat Kidney Milk Sheep Muscle Liver, Fat Kidney Pigs Muscle Liver, Fat Kidney	0.1      0.1  0.25  4      Not required	0.5 2 5 2   0.5 2 5 0.2 0.2 2 5  0.5 2 5	The U.S. tolerances are for the edible tissues of chicken and turkey, and for kidney and muscle in cattle
Spiramycin	Cattle Muscle Liver Kidney Fat Milk Pig Muscle Liver Kidney Fat Chicken Muscle Liver Kidney Fat	none	0.2 0.6 0.3 0.3 0.2  0.2 0.6 0.3 0.3  0.2 0.6 0.8 0.3	

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Streptomycin	Calves			Codex MRLs are the same as those for dihydro-streptomycin. Codex MRLs are generic for cattle. The group ADI is for combined residues of streptomycin and dihydro-streptomycin. The U.S. tolerances in chicken, swine, and calves established in kidney and for other edible tissues. No tolerance is established for milk.
	Muscle	0.5	0.6	
	Liver	0.5	0.6	
	Kidney	2.0	1	
	Fat	0.5	0.6	
	Milk		0.2	
	Pig			
	Muscle	0.5	0.6	
	Liver	0.5	0.6	
	Kidney	2.0	1	
	Fat	0.5	0.6	
	Chicken			
	Muscle	0.5		
	Liver	0.5		
	Kidney	2.0		
	Fat	0.5		
Sheep				
Muscle		0.6		
Liver		0.6		
Kidney		1		
Fat		0.6		
Milk		0.2		
Sodium sulfabromo- methazine	Cattle		none	The U.S. tolerances are for edible tissues of cattle and for milk.
	Edible tissues	0.1		
	Milk	0.01		
Sodium sulfa- chloropyrazine monohydrate	Chickens		none	The U.S. tolerances are for edible tissues of chicken.
	Edible tissues	0		
Sulfachloro- pyrazine sodium monohydrate	Chickens		none	The U.S. tolerances are for edible tissues of chicken.
	Edible tissues	0		
Sulfachloro- pyridazine	Calves		none	The U.S. tolerances are for the edible tissues of, calves, and swine.
	Edible tissues	0.1		
	Pig			
	Edible tissues	0.1		
Sulfadimethoxine	Cattle		none	The U.S. tolerances are for milk and the edible tissues of cattle, chicken, turkey, salmonids, catfish, ducks and chukar partridge.
	Edible tissues	0.1		
	Milk	0.01		
	Chicken, Turkey			
	Edible tissues	0.1		
	Salmonids			
	Edible tissues	0.1		
	Catfish			
	Edible tissues	0.1		
	Ducks			
Edible tissues	0.1			
Chukar Partridge				
Edible tissues	0.1			
Sulfaethoxy- pyridazine	Cattle		none	The U.S. tolerances are for milk and the edible tissues of cattle and swine.
	Edible tissues	0.1		
	Milk	0		
	Pig			
	Edible tissues	0		
Sulfamerazine	Trout		none	The U.S. tolerances are for the edible tissues of trout.
	Edible tissues	0		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Sulfamethazine (Sulfadimidine)	Chicken			The U.S. tolerances are for the edible tissues of chickens, turkeys, cattle, and swine. The Codex MRLs are generic for poultry.
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
	Turkey			
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
	Cattle			
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
	Milk		0.025	
	Pigs			
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
Fat	0.1	0.1		
Sheep				
Muscle		0.1		
Liver		0.1		
Kidney		0.1		
Fat		0.1		
Sulfanitran	Chicken Edible tissues	0	none	The U.S. tolerance is for the edible tissues of chicken.
Sulfaquinoxaline	Chicken Edible tissue	0.1	none	The U.S. tolerances are for the edible tissues of chicken, turkey, calves, and cattle.
	Turkey Edible tissue	0.1		
	Calves Edible tissue	0.1		
	Cattle Edible tissues	0.1		
Sulfathiazole	Pig Edible tissues	0.1	none	The U.S. tolerances are for the edible tissues of swine.
Sulfomyxin	Chicken Edible tissues	0	none	
	Turkey Edible tissues	0		
Testosterone and its esters	Cattle Muscle Liver Kidney Fat	0.64 µg/kg 1.3 µg/kg 1.9 µg/kg 2.6 µg/kg	Unnecessary	U.S. codified values are <u>increments</u> , in parts per billion, (µg/kg) above the amount naturally present in untreated animals. Codex states MRLs are unnecessary because residues resulting from the use of testosterone as a growth promoter in accordance with good animal husbandry practice are unlikely to pose a hazard to human health..

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Tetracycline	Calves			See comments also chlortetracycline, oxytetracycline. U.S. tolerances are for the sum of tetracycline residues. Codex MRLs are generic for cattle and poultry. The residue definition is for parent drugs singly or in combination.
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Fat	12	0.1	
	Milk			
	Pig			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Fat	12		
	Sheep			
	Muscle	2	0.2	
	Liver	6	0.6	
	Kidney	12	1.2	
	Fat	12		
	Milk		0.1	
	Turkey			
	Muscle	2	0.2	
	Liver	6	0.6	
Kidney	12	1.2		
Fat	12			
Eggs			0.4	
Chicken,				
Muscle	2	0.2		
Liver	6	0.6		
Kidney	12	1.2		
Fat	12			
Eggs			0.4	
Thiabendazole	Cattle,			Codex MRLs also cover residues derived from feed containing the residues resulting from agricultural use. The U.S. tolerances are for edible tissues of cattle, sheep, goat, pig and pheasant, and goat milk.
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
	Milk	0.05	0.1	
	Goat			
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
	Milk	0.05	0.1	
	Sheep			
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
	Milk	0.05	0.1	
	Pig			
	Muscle	0.1	0.1	
	Liver	0.1	0.1	
	Kidney	0.1	0.1	
	Fat	0.1	0.1	
Pheasant				
Edible tissues	0.1			
Tiamulin	Pig		none	
	Liver	0.6 <sup>13</sup>		

DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Tilmicosin	Cattle			The Codex MRL for sheep milk is temporary.
	Muscle	0.1	0.1	
	Liver	1.2	1	
	Kidney		0.3	
	Fat		0.1	
	Milk		0.05	
	Pig			
	Muscle	0.1	0.1	
	Liver	7.5	1.5	
	Kidney		1	
	Fat		0.1	
	Sheep			
	Muscle,	0.1	0.1	
	Liver	1.2	1	
Kidney		0.3		
Fat		0.1		
Milk		0.05		
Trenbolone acetate	Cattle	Not needed		Codex MRLs are for $\beta$ -trenbolone in muscle and $\alpha$ -trenbolone in liver. A U.S. tolerance in the edible tissue of cattle is not needed.
	Muscle		0.002	
	Liver		0.01	
Tripelethamine hydrochloride	Cattle	0.2	none	The U.S. tolerances are for the edible tissues of cattle and for milk.
	Edible tissues			
	Milk			
Trichlorfon	Cattle	none		
	Muscle		0.5	
	Liver		0.5	
	Kidney		0.5	
	Fat		0.5	
	Milk		0.5	
Triclabendazole	Cattle	none		
	Muscle		0.2	
	Liver		0.3	
	Kidney		0.3	
	Sheep			
	Muscle		0.1	
	Liver		0.1	
	Kidney		0.1	
Fat	0.1			



DRUG	SPECIES/ TISSUES	U.S. Tolerance mg/kg	CODEX MRL mg/kg	COMMENTS
Tylosin	Cattle		none	
	Muscle	0.2		
	Liver	0.2		
	Kidney	0.2		
	Fat	0.2		
	Milk	0.05		
	Pig			
	Muscle	0.2		
	Liver	0.2		
	Kidney	0.2		
	Fat	0.2		
	Chicken			
	Muscle	0.2		
	Liver	0.2		
	Kidney	0.2		
	Fat	0.2		
	Eggs	0.2		
Turkey				
Muscle	0.2			
Liver	0.2			
Kidney	0.2			
Fat	0.2			
Eggs	0.2			
Virginiamycin	Pig		none	U.S. tolerances are established for muscle, liver, kidney, and skin/fat of swine, and are not required for the edible tissues of chicken and cattle.
	Muscle	0.1		
	Liver	0.3		
	Kidney	0.4		
	Skin/Fat	0.4		
	Chicken			
	Edible tissues	Not required		
Turkeys				
Edible tissues	Not required			
Cattle				
Edible tissues	Not required			
Zeranol	Cattle	Not required	0.002	A U.S. tolerance is not required for the edible tissues of cattle, and no residue is permitted in the edible tissues of sheep.
	Edible tissues			
	Muscle	0.01		
	Liver			
Sheep	No residue			
Edible tissues				
Zoalene or (Dinitoluamide)	Chicken		none	
	Muscle	3 <sup>14</sup>		
	Liver	6		
	Kidney	6		
	Fat	2		
	Turkey			
	Muscle	3		
	Liver	3		
Kidney	3			
Fat	3			

Footnotes:

<sup>a</sup> The term “edible tissue” refers to meat (muscle, liver, kidney, fat/skin). It does not include milk or eggs

## MARKER RESIDUES

<sup>1</sup> residues of aklomide (2-chloro-4-nitrobenzamide) and its metabolite (4-amino-2-chlorobenzamide)

<sup>2</sup> albendazole 2-aminosulfone

<sup>3</sup> quinoxaline-2-carboxylic acid (QCA)

- <sup>4</sup> desfuoylceftiofur
- <sup>5</sup> parent drug in chickens but is desethylene ciprofloxacin in cattle
- <sup>6</sup> eprinomectin B<sub>1a</sub>
- <sup>7</sup> metaphenetidine
- <sup>8</sup> residues of famphur including its oxygen analog
- <sup>9</sup> parent drug in tissues but fenbendazole sulfoxide in milk
- <sup>10</sup> florfenicol amine
- <sup>11</sup> 22,23-dihydroavermectin B<sub>1a</sub>
- <sup>12</sup> N-methyl-1,3-propanediamine
- <sup>13</sup> 8-alpha-hydroxymutilin
- <sup>14</sup> zoalene (3,5-dinitro-*o*-toluamide) and its metabolite 3-amino-5-nitro-*o*-toluamide

DRUG	SPECIES/TISSUES	U.S. R <sub>m</sub> mg/kg	CODEX MRLs mg/kg	COMMENTS
Carbadox	Pig Muscle Liver	0.03	0.005 0.03	The 60 <sup>th</sup> JECFA recommended that current MRLs be withdrawn. CCRVDF has not reviewed the recommendation.